

**For space is dark
... and full of terrors**



NEW HORIZON

Core Rules - Volume 2

NEW HORIZON

core rules 6.2 – volume 2

New Horizon is a game about humanity's spread into our solar system and the horrors we discover as we go there. It is an exciting mix of Blade Runner universe, Aliens movies, Lovecraftian horror and hard science-fiction.

The scope of New Horizon is contained to a fantastical setting that is still familiar to us – our solar system, from Mercury out to the frontier of the Kuiper Belt. Earth is still the center of the universe, home to all mankind, but millions of people dwell in colonies and space stations spread throughout the solar system and beyond. Spaceships travel between the worlds, using technology that propels them from world to world in a matter of weeks or months, instead of years.

Despite the fact that the nations of the solar system are united in a way never before thought possible, the vast distances that separate the colonies of humanity create a sense of isolation. The journeys through the black are long and lonely. There are many who find this isolation difficult to deal with, especially given the things that now roam in the dark.

Horror takes many forms. It is the uncertainty of survival, the suspense of finding malevolent things among the stars, and fear of the unknown. It is the dread of facing Things That Should Not Be, the revulsion when encountering alien things, and the sickening realization of the wrong and ghastly things that humans are capable of doing to themselves and each other. Horror also arises both from the comprehension that there are scary things beyond our understanding inhabiting our universe and that humanity may be its own worst enemy. Despite all of the technological tools and advances available, they still face terrors like losing control of their own identities, their perceptions, and their mental faculties – not to mention their future as a species.

New Horizon is a couple hundred years into the future. In terms of its influences, the setting is approximately equivalent to the technology presented in such movies as Total Recall, After Earth, Outland, Starship Trooper, Avatar, Elysium, Predator, Doom, Pandorum, Event Horizon or The Expanse TV series.



FOR MATURE AUDIENCES ONLY
This book is intended for mature readers. It contains
dark and disturbing content and images.
Reader discretion is advised.

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The Setting

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"We train young men to drop fire on people, but their commanders won't allow them to write 'fuck' on their airplanes because it's obscene!"

Colonel Walter E. Kurtz – UEAF Special Forces

Politics

The United Earth Federation (UEF)

The United Earth Federation of the 23rd Century still bears some resemblance to the original United Nations, that troubled institution born in the aftermath of World War II. While still dealing with problems of patronage and bureaucracy, sheer necessity has enabled the body to become somewhat effective in its original purpose of keeping the peace.



The United Earth Summit in Geneva, 1st January 2085, was attended by Australia, China, the European Federation, Japan, New Zealand, the Russian Republic, South Africa, and the United Americas. The nations attending the summit proposed that the United Nations Constitution be radically ratified. These proposals in effect dissolved the United Nations, replacing it with the United Earth Federation (UEF), an economic/political conglomerate committed to the goal of uniting the nations of Earth in preparation for the colonisation of the planet Mars and the rest of the solar system. The colonisation of space has greatly aided the nations of Earth in putting aside national differences, enabling them to present a (mostly) unified front as the United Earth Federation. Despite this, some experts say that human tribal instincts have simply shifted to an interplanetary and interstellar rather than global stage.

Important branches of the United Earth Federation include:

1. General Assembly
2. Security Council
3. Interstellar Colonial Authority
4. Interstellar Trade Commission
5. Communications
6. Military
7. Intelligence
8. The Federal Law Enforcement Authority
9. The Colonial Security Force
10. The Federal Health Service
11. The Federal Labour Force

Notable legislation introduced by the UEF include:

1. The Colonial Act (2140)
2. The Colonial Policing Charter (2140, 2265)
3. The United Earth Federation Space Treaty (2101, 2140)
4. The Geneva Statute (2084, 2140)

General Assembly

Based in Geneva, the General Assembly is the main deliberative organ of the United Earth Federation. It is composed of representatives of all member states, each of which has one vote. Despite this supposedly level democratic playing field, politics are still dominated by the richest of the member states. Decisions on important questions, such as those on peace and security, admission of new members and budgetary matters, require a two-thirds majority. Decisions on other questions are by simple majority. The wheels of United Earth Federation government move slowly on many issues because of the time needed for the General Assembly to reach consensus.



The General Assembly may meet in special sessions at the request of the Security Council, of a majority of member states, or of one member if the majority of members concur. Emergency special sessions may be called within 24 hours of a request by the Security Council on the vote of any nine Council members, or by a majority of the United Nations members, or by one member if the majority of members concur.

At the beginning of each regular session, the Assembly holds a general debate, often addressed by heads of state and government, in which member states express their views on the most pressing international issues.

Security Council

The composition and rules under which the Security Council operates have changed since the United Nations became the United Earth Federation. While there are still only five permanent member seats, (United Americas, the Chinese Consortium, European Federation, Russian Republic and the Japanese Affiliates), India, the Central African Bloc, Australia, and the Islamic Holy Republic also retain seats on the Security Council on a regular basis. Also, the power of the permanent member veto has changed a permanent member veto can be overridden by a four/fifths majority vote of the rest of the council. (12 votes out of the 15 seats available).



When a dispute leads to fighting, the Council's first concern is to bring it to an end as soon as possible. On many occasions, the Council has issued cease-fire directives which have been instrumental in preventing wider hostilities. It also sends United Earth Armed Forces peace-keepers to help reduce tensions in troubled areas, keep opposing forces apart and create conditions of calm in which peaceful settlements may be sought. The Council may decide on enforcement measures, economic sanctions (such as trade embargoes) or military action.

A Member State against which preventive or enforcement action has been taken by the Security Council may be suspended from the exercise of the rights and privileges of membership by the General Assembly on the recommendation of the Security Council. A Member State which has persistently violated the principles of the Charter may be expelled from the United Earth Federation by the Assembly on the Council's recommendation.

Interstellar Colonial Authority (ICA)

Formed after the Colonial Act of 2140, the Interstellar Colonial Authority, is a branch of United Earth Federation government tasked with the government of colonised space out beyond the Sol system designated as Zones 2 and 3 of the Federated Colonies, and to a limited extent representing UEF policies in Far Space. The ICA is responsible for the day to day management of these colonies, including local law and order, liaison with Earth, communications, logistics and a host of other functions. In the absence of direct contact with Earth, the ICA has veto on any local government decisions.



Each colony in Zones 2 and 3 has an ICA presence. On some of the newer colonies it is little more than a small Settlement Welfare Team office with a handful of representatives. On larger, more established colonies there is a large established ICA administrative presence. Larger colonies also sometimes have regional ICA headquarters.

Interstellar distances have to allow for a necessary devolution of certain powers to local leaders, which allows the elections of local officials by the colonial population. Despite this, the local ICA Administrator is able to dictate policy should he see fit. It is common practice for megacorporations with invested interests in a colony start up to have representatives on local councils.

The ICA has surveyed hundreds of worlds, and it's exploration arm, Interstellar Expeditions (ISX), is in the process of surveying dozens more. Each world surveyed is classified according to how much work is needed to establish a colonial base, and how rich the planet is in natural resources. Once a world has been surveyed and classified, contracts are then issued, up for bid by any nations and corporations interested in investing in the venture.

The ICA is also in charge of interstellar immigration/emigration. Despite hundreds of millions of people now living offworld in the colonies, Earth in the late 23rd Century is still home to almost 10 billion people and is woefully overcrowded. To compound matters, those wishing to live in the colonies must apply for Colonist Status from the ICA. This involves a series of rigorous background checks, physical, mental and psychological examinations.

Interstellar Trade Commission (ITC)

The Interstellar Trade Commission (ITC) came into being in 2140, when, in an effort to regulate interstellar commercial shipping and trade, the WTO was radically expanded and remodelled. The ITC is the primary body dealing with commerce throughout the systems colonised by the UEF in the



23rd century. All crewmembers of commercial transport and cargo starships are required by Federal law to possess a valid ITC licence.

The ITC also deals with Customs and Excise Duties. The ITC enforces shipping restrictions and biological and chemical quarantine procedures for Earth and all other colonies. In addition to performing spacedock inspections, the ICC can randomly detain, seize, and search cargo and personal craft for suspected contraband. All trade starships entering the Sol system must be prepared to go through ITC quarantine, if the ITC suspects the ship is carrying any unauthorised cargo.

In addition ITC officers often work closely with Colonial Marines strike teams, fighting the endless battle against smugglers, pirates and terrorist groups that are active in the Federal Colonies.

The Federal Network (FedNet)

The Federal Network, or FedNet, is the collective term for the technology behind the wirelessly-networked, ubiquitously-connected urban environment of the 23rd century. FedNet provides entertainment in the form of over a thousand digital television and radio channels, information in the form of the Interstellar Web (ISW), communications access for Personal ComLinks etc etc.

This would be amazing if it were just on Earth, but a series of FTL Relay Stations throughout the Federal Colonies provides FedNet access to everyone who holds Citizenship in the United Earth Federation. While the citizens of the Sol system can enjoy realtime FedNet access, those further afield have time delays, as FTL datastreams travel at a maximum speed of 1 parsec per day. As a result, common information is stored locally at the larger colonies, and orbiting satellites allow wireless communications.



United Earth Armed Forces (UEAF)

The formation of the United Earth Federation was the spark for several conflicts (the Unification Wars 2085-2102), primarily fuelled by nations who refused to be a part of the new global government. In response, the newly formed United Earth Federation ratified a treaty of United Earth Armed Forces, a cohesive fighting force to stop these and future wars, with troops and equipment supplied by all member states, under one general command staff comprising of high ranking officers of all nations.

The military arm of the United Earth Federation, tasked with defending Earth and the Federal Colonies against any and all outside aggressors. The UEAF is split into two distinct branches: SpaceCorps and PlanetCorps. SpaceCorps is the branch of the UEAF that incorporates naval fleet units, marine corps and other associated ancillary organisations. The PlanetCorps consists of infantry, armour and other ground-based military units.



- **AmeriCorps:**
Units of the UEAF PlanetCorps supplied by the United Americas and its colony worlds.
- **AsiaCorps:**
Units of the UEAF PlanetCorps supplied by the Russia Republic and its colony worlds, as well as several other Eurasian states.
- **ChinaCorps:**
Units of the UEAF PlanetCorps supplied by the Chinese Consortium and its colony worlds.
- **EuroCorps:**
Units of the UEAF PlanetCorps supplied by Europe and its colony worlds.
- **JapanCorps:**
Units of the UEAF PlanetCorps supplied by the Japanese Affiliates and their colony worlds.
- **The United Earth Federation Expeditionary Force (UEFEF):**
The taskforce assembled by the UEF from the PlanetCorps at the start of the colonial wars to mount the campaign to stop colonial secession in the Outer Rim Territories. The campaign met with limited success. Three years of war resulted in two firmly established separatist pockets of space, independent from Earth rule. The UEFEF presence in the Outer Rim Territories was scaled back after the end of hostilities, but several bases are maintained close to borders with separatist controlled space, as part of a so far unsuccessful military and economic blockade.

■ **Martian Marine Corps (MMC):**

The Martian Marine Corps (MMC) is part of the UEAF assigned to the defence of the Mars colony. The MMC serve on Martian-controlled outposts and navy ships throughout the Sol system, including Ganymede before the incident, and are the counterpart to the Interstellar Colonial Marine Corps (ICM). They use powered, vacuum-rated armor and operate in a wide range of combat situations utilising a variety of equipment and tactics. MMC Force Recon Marines use Goliath Mark IV Powered Armor and formerly the obsolete Mark III.



■ **United Earth Space Command (UESC):**

The United Earth Federation space navy. There are at present twelve 'fleets' in the UESC, as well as a multitude of other auxiliary support groups. The 1st Fleet is nominally assigned to the defence of the Sol System.

■ **Interstellar Colonial Marine Corps (ICM):**

The Federation's interstellar rapid reaction force, the ICM deal with colonial disputes, piracy, civil unrest and just about every other problem that occurs in the colonies requiring the possible exercising of brute force. The ICM incorporates units specially trained for vacuum operations, shipboard combat and planetary assault.

The Interstellar Colonial Marine Corps (ICM) was formed from the Interplanetary Marine Corps (the IP Marines) to enable the UEF the ability to project military force quickly and decisively throughout its sphere of influence to quickly resolve colonial disputes and keep the peace.

The duty of the ICM is strictly devoted to the defence of all United Earth Federation colonies in space. Interstellar Colonial Marines are the vanguard of the UEF/ICA interstellar armed forces, responding swiftly and potently against any aggressor who should pose a threat to the security of Federation territory and civilians in space, whether it be a human aggressor, intelligent extraterrestrial force, or a "pest control" situation involving primitive alien lifeforms.

In many ways Colonial Marines are 'special forces', undertaking short to medium duration missions including ship-to-ship and fleet boarding actions, or the establishing of the initial planet head during a planetary assault. They are also tasked with shipboard security of United Earth Armed Forces spacecraft. The ICM possesses organic ground and air combat elements, and relies upon the United Earth Space Command (UNSC) fleet units to provide space combat elements to fulfill its mission.

■ **Colonial Security (ColSec)**

The ICA and ITC are backed by the Colonial Security force (ColSec), a subsidiary of the Federal Law Enforcement Authority (FLEA). Recruited locally where possible, ColSec act as a colonial police force who maintain law and order throughout the Federal Colonies.

■ **The Sol Defence Fleet:**

Collective name for space vessels of the UEAF assigned to defend Sol system against aggressors.

■ **Military Sciences Commando Division:**

Black Ops unit attached to the Federal Government's shadowy Military Sciences Division.

■ **The Psychic Operations Group (POG):**

Branch of the UEAF recruited directly from the Metasensory Academy. Also referred to as PsiCorps. POG is mostly an organisational structure, as operatives are usually assigned to other line units as needed. The Psychic Operations Group is headquartered at Fort Alexander, Hecates Tholus, Mars.

■ **UEAF Special Operations Group Command (SOGC):**

SOGC is essentially the special forces of the UEAF. SOGC is responsible for 13 Special Operations Groups (SOGs). Each SOG is small and self-contained, and size varies between groups. The most famous (and largest at company strength) unit is the 3rd SOG, that saw action on the Rimworlds Front during the Colonial Wars.

Other Military Organisations outside of the UEAF:

■ **The People's Commando Division:**

Special Forces unit from the Eurasian Rimworlds Combine.

■ **Royal Marine Commandos (Commachio Group):**

Commachio Group's responsibility for protecting British oil rigs was extended in the 2030s to the United Kingdom's near-Earth-orbit asteroid mining operations. As the largely British-owned Vosper-Babbage corporation expanded into the Main Belt, its mission has further extended to protecting the lives and property of Her Majesty's subjects. The Royal Marines (Commachio Group) are a modern force, specialists in assaulting

and defending asteroid installations, and are considered one of the finest counter-terrorist and hostage-rescue units in the solar system.

■ **Foreign Legion (Légion Étrangère, 2e Régiment Étranger Spatial):**

The Foreign Legion is a professional fighting force with a proud tradition dating back to 1831. Legionnaires are famous for their *esprit de corps*: men of action, brave in combat, sharing close bonds of comradeship. Their motto is *Legion Patria Nostra*: the Legion is our homeland. They vow never to abandon a comrade, alive or dead, on the battlefield. The Legion is unique in that it accepts volunteers from any nation, model, or species who can meet its standards, and allows them to join under an assumed name. As such, people will often enlist to escape a troubled past (though the Legion does not accept criminals) or seek adventure. Officers are French, but more than half the enlisted personnel come from other nations. After completing three years' service, recruits may be granted French (and European Union) citizenship.

The 2e Régiment Étranger Spatial is the Legion unit trained for spaceborne operations. It is experienced in low-gravity vacuum operation on Mercury and in microgravity assault on orbital factories and L5 colonies.

■ **67th Space Infantry Division (SID):**

China's Space Mobile Infantry, the 67th SID, saw some action during the Pacific War, although the heaviest fighting was on the ground. It consists of three *quanto* ("fist") rapid-reaction brigades: one based at Rust China on Mars, one on Taiko Station (normally for training and refitting), and one divided into smaller units stationed on other Chinese installations and spacecraft throughout the system. In addition to assault tasks, they provide security at Chinese spaceports and major space stations. Service in the 67th in one way for a bioroid to obtain high status in Chinese society.

The Federal Security Agency (FSA)

The Federal Security Agency (FSA) coordinates, directs, and performs highly specialised activities to protect UEF government information systems and produce foreign signals intelligence information. A high technology organisation, the FSA is on the frontiers of communications and data processing. It is also one of the most important centers of foreign language analysis and research within the federal government.



FSA conducts some of the UEF's leading research and development (R&D) programs. Some of the Agency's R&D projects have significantly advanced the state of the art in the scientific and business worlds.

The Federal Law Enforcement Authority (FLEA)

Policing in the 23rd Century is handled by the Federal Law Enforcement Authority (FLEA). From their headquarters on Earth, and via many local stations throughout the Federal Colonies, Federal police officers have the unenviable task of tackling crime over interstellar distances.



The Genetic Regulatory Agency (GRA)

The GRA was founded in 2156 as an office of the European Federation, although Switzerland also worked with it from the outset – indeed, its first headquarters was in Geneva. Its original mission was to police abuses of human genetic engineering (HuGE). This required agreement as to what was abuse, and harmonization of national laws; the creation of the GRA represented a major accomplishment in both idealism and politics.



In the wake of its Civil War, Russia found itself struggling to suppress a hyperactive "biotech underground" and to shed a reputation for lawlessness; signing up with the GRA looked like good politics. Its new Russian agents were keen to see action, not just to file reports, and many of the older preservationist European Federation staff were happy to go along. The GRA managed to acquire comprehensive powers within signatory states, and an efficient intelligence section to monitor biotech globally. Rumors began to spread that this section's agents weren't above a bit of extraterritorial, extralegal sabotage. This has always been denied, but GRA "spies" certainly sometimes stretch legal limits or abuse diplomatic status.

Over time, the GRA's effectiveness in dealing with problems within its ambit was globally acknowledged. Some preservationists came to idolize it, while authorities in other power blocs became happy to consult its experts. After all, it was known to be rigorous about not favoring any one nation's interests. A series of diplomatic agreements gave agents "visiting rights" far beyond Earth.

The GRA's international role might have remained purely advisory, but a series of biotech accidents and artificial-disease outbreaks in less advanced areas panicked several nations into giving GRA agents free rein. Biotech crimes can be truly horrible occurrences, and anyone offering a solution – and trying not to overreach themselves – could find welcome in many places.

The agency also has become involved in policing international bioroid crime, which often involves the same criminal groups as illegal HuGE. This sort of thing, and the need to expand its operations into space and the oceans, leaves the GRA stretched, administratively and financially. The desire to preserve a polite image, to make it easier to acquire funding and diplomatic privileges, often conflicts with agents' fiercely preservationist attitudes. The GRA is frequently accused of bullying its way around the Outer Rim Territories; certainly, agents may care more about biotech safety standards than they do about local sensibilities.

Religion

Devotion to God is a force to be reckoned with. As long as humanity needs answers to the unanswerable, there will be religion. All the major religions of the 21st century are still going strong, with a few notable additions, and are represented on the Frontier in one form or another. One of the fastest growing religions in the 23rd century is Chrislam – an amalgamation of Christianity and Islam that occurred during the Second Exodus (2166-96) from Earth. Chrislam is a very popular religion in the colonies, though it has made little headway on Earth.

Due to the economic depression and rigors of life in space, extreme offshoots and sects are more commonplace. Apocalypse cults, fundamentalist missionaries, and spiritual gurus travel the Frontier, recruiting colonists and strengthening their flock.

In fact, the one egg that corporations seem to have been unable to crack is religion. Even small cults can be fanatical enough to evoke change, and companies want employees with that kind of fervor working for them. Corporate execs have even attempted – so far without success – to create a cult or two of their own. Some have come to the conclusion that beliefs can't be manufactured, only sponsored. To that end, corporate reps have begun approaching existing religious groups in the hopes of aligning goals in the name of the almighty profit margin.

Millenarian Doosayers

Fundamentalist groups that believe the end times are near, millenarian doomsayers await their final judgment and the coming of God. Vowing celibacy, members of these apocalyptic brotherhoods seek to atone for their past sins through hard labor and devout penance. Unsurprisingly, the largest fanatical followings are on prison colonies, where the population has nothing to do but await apocalyptic redemption. As such, doomsayer groups often attract reformed murderers and rapists. Punishment for those who stray is often severe, ranging from isolation to starvation, severe beatings, and even mutilation.

Monastic Order of Arceon

An anti-technology movement that started on Earth, the Order of Arceon grew exponentially when the Crawling Chaos virus wiped out a huge portion of the world's data. After it was exposed that a member of the Order was responsible for the virus, the movement was deemed a global threat by the UEF. Those directly responsible were arrested and Weyland-Yutani was contracted to contain and move the rest of the Order's members to an offworld location. The movement was squashed and the Order was transplanted to the artificial satellite world of Arceon (more on Arceon in the space station section). There they live a monastic and mostly technologically free existence on a space station that ironically could not exist without technology.

Practitioners of The Holy Immolation

A quasi-religious pacifist group in direct opposition to the corporate domination of the colonies, the Practitioners of the Holy Immolation first emerged during the Tientsin Campaign. Since then, these fanatics have become known for staging protests where one or more of their members will immolate themselves in the name of a free Frontier. Mostly a threat to themselves, they sometimes endanger others when their fires grow out of control in sensitive areas, such as in a biodome or on a space station.

Church of The Immaculate Incubation

Not much is known about this fledgling group. Some authorities suspect they might be a splinter faction of the infamous Earthsavers cult. A century-old group originally formed by dreamer and self-proclaimed prophet Duncan Fields, the Earthsavers believed that humanity's sojourn to the stars would herald the apocalypse. Like that long dead organization, the Church of Immaculate Incubation places heavy emphasis on the apocalyptic dreams of its fanatical seers. They believe the end times are fast approaching, but their spin is that the only survivors will be those who have sought out and achieved transformation to a higher form. This metamorphosis is attained by accepting what they call the Seed of God into their hearts. With few members and nothing to back up their claims, the Church of Immaculate Incubation is essentially harmless. Believing the alien creature in Robert Morse's banned book to have messianic significance to the imminent apocalypse, the Church readily distributes illegal copies of Space Beast throughout the colonies. As they seek to share the dreams of their prophets with their flock, they also actively recruit professional dreamers to their cause. Their enigmatic leader is rumored to be a wealthy man who has forsaken the good life and poured his resources into the Church.

The Colonial Act

The conquest of space was never an easy undertaking. Indeed, the first tentative steps into space by humanity were difficult and often costly. Despite the many obstacles and deterrents, Humanity gradually edged off Earth into space. The colonisation of space and with it the struggle to survive in often strange and hostile surroundings challenged the determination and ingenuity of human civilisation, but three hundred years since Neil Armstrong first set foot on Earth's lunar companion there are millions of people who call planets beneath alien skies home, many of whom have never set foot on the planet which will always be their spiritual birthplace.

Despite Sol being little more than another star in the night sky to many of these colonists, the majority are still tax-paying citizens of the United Earth Federation (UEF). Though the UEF would deny it in the strongest terms, it is to all intents and purposes an imperial power, with regional governors administering colonial assets. The maintenance of order in an interstellar civilisation requires a degree of control which to many is in itself undesirable, and the nearer one approaches the administrative centre of such a society, the more rigid its constraints.

It required an interstellar war to show the UEF that it simply was not organised or equipped to police and govern the every growing number of colonies and shipping lanes out beyond the Core Systems.

In 2138, rival megacorporations EnerTek Corp and Cheung Corp clashed on the planet Anjuna in the Tau Ceti star system in what would become known as the Tau Ceti War. Territorial disputes between the two corporations on Mars two years earlier persuaded both to hire mercenaries to help protect colonial assets out beyond Sol. At first the fighting was localised to a handful of contested sites, but tit for tat revenge attacks by both sides quickly caused matters to escalate out of control. Undercover support flowed in from Chinese and American factions on Earth, spreading and deepening the conflict across the system.

After 18 months of fighting, the Viking Treaty of 2140 signed at the Mars Colony, brought an end to the conflict.

Though the war was over, it had been a wake-up call for the UEF. Faced with a gradual erosion of power by the continuing interstellar colonial expansion, and the possibility that this could lead humanity to splinter into dozens of factions, the UEF moved quickly to restructure and reposition itself. The changes resulted in a piece of legislation being passed called the Colonial Act.

A Brief Definition of the Federal Colonies

The Federal Colonies encompasses a sphere of influence 20 light years in radius with Sol at the centre. The UEF reserves the right to expand this sphere of influence, and annex any colonies lying beyond it's boundaries, up to and including all star systems in a 50 light year radius from Sol.

The Federal Colonies is split into three distinct zones of control:

Federated Colonies Zone 1:

Federated Colonies Zone 1 comprises all planets in the Sol system, and is controlled directly by the UEF government. Territory within the Sol System that is not on the planet Earth is not subject to national or corporate appropriation by claim of sovereignty. Colonies and outposts within this region are not considered to be the territory of any one nation or corporation. This means no territory within this region can declare itself a nation, independent of UEF control.

Federated Colonies Zone 2:

Federated Colonies Zone 2 is a sphere 12.5ly in radius, with Sol at the centre, and called the Core Systems. This region is controlled by the UEF via the Interstellar Colonial Authority (ICA). Territory within this region is not subject to national or corporate appropriation by claim of sovereignty. Colonies and outposts within this region are not considered to be the territory of any one nation or corporation. This means no territory within this region can declare itself a nation, independent of ICA control.

Federated Colonies Zone 3:

Federated Colonies Zone 3 stretches from the outermost edge of the Core Systems to the edge of the Federal Colonies, and is referred to as the Outer Colonies. This region is controlled by the United Earth Federation via the ICA. Within this region, the ICA has the authority to regulate the use of, and territorial claims to, any celestial body or region of space. The ICA currently recognises claims up to 1000km around a landing area. The ICA may offer colonisation contracts to nations and/or corporations to larger territorial regions than 1000km if it sees fit.

Far Space:

Far Space lies out beyond Federated Colonies Zone 3. It is often referred to as the Outer Rim Territories, or simply the Frontier. Out here UEF member states, non-governmental bodies, private concerns, and corporate entities may establish manned or unmanned facilities on celestial bodies for scientific investigation, commercial use or human settlement. Such endeavours however must be registered with, and regulated by, ICA law.

Apart from a few obvious exceptions, ICA presence and influence at colonies in this region is limited, usually no more than a small Settlement Welfare Team. Corporations or other concerned parties may come to local commercial arrangements with each other when engaged in ventures out this far. ICA law runs only as far as to cover crimes against Federation personnel, or criminal events on or concerning Federation spacecraft in as much as Federation spacecraft must abide by the principles of Space Law. Apart from a few exceptions there is generally no active policing of Far Space outside of the larger colonies. Most small colonies in this region have learned that as long as they keep their heads down and noses relatively clean, ICA control is a remote form of government at best.

It can be a dangerous, lawless place, as the only star systems with anything like a substantial UEF/ICA presence are those bordering the breakaway regions of space formed after the Colonial Wars.

Basic Tenets of the Act

The Colonial Act places Zones 2 and 3 of the Federated Colonies under the control of the Interstellar Colonial Authority (ICA). The United Earth Federation maintains direct control of the Zone 1 Sol colonies.

The Colonial Act allows the UEF the legal right to establish an ICA presence on any colony in Far Space if the security of the Federated Colonies requires it.

Local laws established by corporate run colonies must be agreed to by both employer and employees.

In carrying out activities in outer space and on celestial bodies in the region of space designated as the Federal Colonies, all citizens of the UEF must render all possible aid to anyone in distress, regardless of nationality or corporate affiliation.

All signatories to the Colonial Act must inform the UEF, either directly or via the ICA, upon discovering any phenomena in outer space which could constitute a danger to the life of Federal citizens.

All signatories to the Colonial Act must inform the UEF, either directly or via the ICA, upon discovering evidence of extra-terrestrial life, so that it can be catalogued and investigated properly.

Non-governmental organisations may not possess or carry weapons of mass destruction, or weaponised radioactives, within the region of space designated as the Federal Colonies.

New Organisations Created by the Act:

- The Interstellar Colonial Authority (ICA)
- The Interstellar Trade Commission (ITC)
- Colonial Security (ColSec)
- The Interstellar Colonial Marines (ICM)

Political Power Blocks

Though the political landscape of Earth has forever changed from that at the turn of the 21st century, some things stay remarkably familiar. Earth, the Sol System and the Core Systems are now governed by the United Earth Federation (UEF), a world government that replaced the United Nations in 2085AD. This global government includes representatives from all the nations of Earth, who are now termed Member States. As with modern day politics, the most powerful economic power blocks heavily influence Federal policy and the decisions of the Security Council. The most influential are listed below:

Major Member States

- The Chinese Consortium
- The European Federation
- The Japanese Affiliates
- The Russian Republic
- The United Americas

Minor Member States

- The Australia Republic
- The Central African Bloc
- The Democratic Republic of India
- The Islamic Holy Republic

Non-UEF Powers

- The West African Protectorate

In addition to these economic power blocks on Earth, there are also two colonial splinter factions in the Outer Rim Territories who, while not recognised by the UEF, deserve a mention here:

- The Eurasian Rimworlds Combine (ERC)
- The Free Worlds Alliance (FWA)

The Australian Republic



Politics	Democratic Republic
Population	Earth: 40.14 million
	Space: 3.1 million (approx)
Colonies	None

Economy:

Australia has a prosperous Western-style capitalist economy, with a per capita GDP on par with the five dominant colonial powers.

Description:

Long-term concerns include pollution, particularly depletion of the ozone layer, and management and conservation of coastal areas, especially the Great Barrier Reef. A referendum to change Australia's status, from a commonwealth headed by the British monarch to a republic, was passed in 2028.

Australia as a nation has not featured heavily in the colonization of space. Much of the nation's economic wealth has been diverted into the "Rebirth" project, aimed at reclaiming the vast tracts of land that have turned into uninhabitable desert. This has not stopped Australian nationals joining the millions of other Earthers who have applied for colonist status to find a new life in the offworld colonies.

The Central African Bloc



Politics	Democratic Republic
Population	Earth: 370.84 million
	Space: 2.7 million (approx)
Colonies	None

Economy:

The Central African Bloc is still a developing nation state, and its economy is still too weak to invest in space flight or the colonization of other worlds. CAB satellites orbit the Earth and like the Australians, African nationals too have joined the millions of others applying for colonist status on Earth.

Description:

Advances in solar energy technology in the mid 22nd century resulted in development in lower latitudes of the world. After the generations of civil wars that had plagued Africa, the Commonwealth of African Nations was dissolved, and two power blocks emerged: the West African Protectorate and the Central African Bloc. Both blocks were industrialising and developing rapidly until Maunder Minor hit in 2120. Repeating a behaviour first exhibited in the seventeenth century, though this time to a much lesser extent, the Earth's sun dimmed. The effect lasted over two decades, until 2146, and it contributed to the economic collapse of those equatorial powers who relied heavily on solar power, including the nations of the Protectorate. The resultant social upheaval forced many to look to find work offworld, as colonist-workers in the fledgling Jovian and Saturn colonies. The nations they left behind quickly dissolved into civil war.

The Central African Bloc had hedged its bets investing in fusion power as well as solar power, and it paid off. Surviving Maunder Minor, in 2146 delegates from the Central African Bloc took their places at the United Earth Federation in Geneva.

The Chinese Consortium



Politics	Authoritarian Socialism with Technocratic tendencies
Population	Earth: 1.88 billion
	Space: 168.21 million (approx)
Colonies	7

Economy:

The economic influence of non-state organizations and individual citizens continues to steadily increase. Foreign investment remains a strong element in the Chinese Consortium's remarkable economic growth. There is still heavy government involvement in business, but now Party leaders are also board members of companies such as the Cheung Corporation. GDP: E\$91.4 trillion.

Description:

Formed in 2086 by China and most of South East Asia following the end of the Pacific Rim War, the Chinese Consortium is the largest and most powerful member state of the United Earth Federation, and the largest contributor to the Earth economy. Though still officially Communist, internal policies have softened since the formation of a global government. The state is socialist in political orientation.

Culturally, the Chinese Consortium incorporates elements from South East Asia, Russia, China and other old socialist powers of the preceding three centuries, with Chinese, Vietnamese and Russian being the principle languages. Men and women have equal, even in the military, but androids have only machine status. The people have very strong faith in their socialist ideals, which is seen by many as an extreme reaction to the capitalism of the United Americas and European Federation territories.

Along with the United Americas, the Chinese Consortium is at the forefront of the UEF interstellar colonisation programme. Since missing out on the first wave of Lunar colonisation in the mid 21st century, China was first to sign up to the Mars Project, and invested heavily. To this day a large proportion of the Martian population are of Chinese descent.

The European Federation



Politics	Federal Democracy. National legislature was replaced by direct federal democracy in 2029.
Population	Earth: 262.57 million
	Space: 114.20 million (approx)
Colonies	10

Economy:

The European Federation has an affluent and technologically powerful economy, with substantial offworld assets and investments. As a member state of the United Earth Federation, it controls a large slice of Earth's financial markets. GDP: E\$81.2 trillion.

Description:

Formed in the early part of the 21st Century out of the European Union, the European Federation is one of the five major colonial powers in ICA regulated space. It consists of the original member states of the European Union, eastern Europe plus some of the defunct USSR break away states in the Baltic region.

The European Federation emerged from the political turmoil of the 21st century as one of the major economic powers on Earth. Seen as the most liberal of these power blocks, the borders of the European Federation territory seem out of place: high perimeter fencing, forboding watchtowers bristling with state of the art surveillance technology and armed patrols have been the norm ever since the Unification Wars of the late 21st century (2085-2102). During this chaotic period, as the newly formed UEF and it's armed forces fought a reluctant war of global unification with break-away states, the European Federation was forced to close it's borders to the hundreds of thousands of refugees fleeing the warzones, unable to cope with such a large influx of people.

Quality of life for citizens of the European Federation is generally good, with most people employed by the government or one of several megacorporations. Despite being a unified state, citizens still retain a strong individual national pride.

The Democratic Republic of India



Politics	Democratic Republic
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Population	Earth: 1.3 billion
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	Space: -
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Colonies	none
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Economy:

India's diverse economy encompasses traditional village farming, modern agriculture, a wide range of modern industries including genetics and nanotech.

Description:

India is fast catching up with the dominant member states of the United Earth Federation. There are striking contrasts in quality of living, from the overcrowded and technologically advanced coastal cities to the vast rural regions. India is the heart of the entertainment industry on Earth, Bollywood having overtaken Hollywood in the early 22nd century. It has not yet invested in any colonial ventures, but the state is facing a crisis as many of its younger generations are tempted by the rich megacorps into lucrative contracts as technical specialists and software engineers at off-world colonies.

The Islamic Holy Republic



Politics	Theocratic Republic
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Population	Earth: 188.48 million
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	Space: 2.4 million (approx)
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Colonies	none
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Economy:

The economy is a mixture of central planning, state ownership of oil and other large enterprises, village agriculture, and small-scale private trading and service ventures. No Islamic corporations are strong enough yet to invest in space exploration or colonisation.

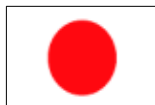
Description:

Born from the fallout of the 5th Middle East War, the Islamic Holy Republic is a significant minor power, capable of competing directly with any other power except the five Major Powers. Once rich and powerful due to the region's abundant fossil fuel resources, the advent of fusion power combined with dwindling oil reserves stopped the Islamic Holy Republic from becoming a major colonial power.

The Islamic Holy Republic suffers from an overly aggressive foreign policy and second rate technological capability. The region is in theory ruled by the Council of Sultans with the assistance of the provincial amirs; in practice, the amirs only put their feuding on hold when it is obviously necessary to fight off an immediate outside threat.

The Islamic Holy Republic has incorporated Islamic law into its legal systems. Certain Muslim states have declared Islam to be their state religion in their constitutions and apply Islamic law in their courts. Pan-Islamism advocates the unification of the Muslim world under a single Islamic state. The most famous, powerful and aggressive pan-Islamic group that pursues the objective of unifying the Muslim world is the jihadist movement Islamic State of Earth and the Levant.

The Japanese Affiliates



Politics	Constitutional monarchy with a parliamentary government
Population	Earth: 214.31 million
	Space: 68.03 million (approx)
Colonies	7

Economy:

Government-industry cooperation, a strong work ethic, mastery of high technology, and a comparatively small defense allocation (1% of GDP) have helped Japan advance with extraordinary rapidity to the rank of second most technologically powerful economy after the United States and third largest economy after the United States and the European Federation.

Description:

Japan is one of the five major colonial powers. The Japanese Imperial Government is nominally a monarchy and is actually a constitutional monarchy where a large degree of governmental power is vested in the emperor. Unlike the old Earth Chinese Emperor's who received heaven's mandate to rule, Japanese Emperors are literally living gods. This fact has enabled Japan to claim at least 2000+ years of unbroken imperial power.

Also to be reckoned with are the large corporations, which are in some sense hereditary. These corporations, often massive transnationals of the 20th, 21st, and early 22nd centuries, have established themselves as massive controllers of power within the Japanese government. Greatest of these is Cenargo Corporation, an Anglo-Japanese combine which is the major financial investor in Japanese colonial expansion.

The Japan Empire is heavily influenced by Weyland-Yutani – in fact, W-Y is the only non-state to actually have a seat in parliament. Rumors abound that several key members of Parliament have even been replaced with W-Y android duplicates, but none have been exposed – yet. The Empire has maintained a somewhat peaceful relationship with the United States, though the US is wary of the Empire's aggressive expansion efforts and monitors their borders at all times. As tensions rise between the US and Weyland-Yutani, the Empire has become caught in the crossfire. Some feel it is only a matter of time before an armed conflict breaks out along the Frontier.

The Russian Republic



Politics	Federal Republic
Population	Earth: 211.03 million
	Space: 138.48 million (approx)
Colonies	11

Economy:

After the Russian Civil War (2197), the nation suffered an economic depression, but with the help of the UEMF (United Earth Monetary Fund) and the goodwill of its neighbours the European Federation a complete economic collapse was narrowly averted. Russia is still struggling to establish a modern market economy, modernize its industrial base, and maintain strong economic growth.

Description:

The Russian Republic consists of the remains of Russia, Ukraine, Belarus, the Baltic States, and various bits and pieces of the non-EF/UPP Slavic nations. Consisting of territories on Earth as well as several inner colonies some thriving outworld colonies, the Russian Republic is a significant political, military, and economic power, and is one of the five major colonial powers in ICA regulated space.

70 years after the end of the Russian Civil War, which saw the disintegration of the Russian Federation, the Russian Republic has rebuilt much of its infrastructure, through aid from the Federal Bank, and investment from European and Japanese corporations. The prevailing political alignment of the government is somewhat socialist, though much less so than in the early 21st Century. As may be expected in such a society, there is a large gap between rights of the "haves" and "have nots."

In the years following the Russian Civil War, the ICA gave priority to Russian civilians applying for colonial status, as many had lost their homes and families during the fighting. Many of the small 'shake and bake' colonies in the Outer Colonies and Outer Rim Territories have a large proportion of Russian colonists from the Yekaterinburg region, which was totally destroyed during the war.

The United Americas



Politics	Federal Republic; strong democratic tradition
Population	Earth: 512.4 million
	Space: 164.98 million (approx)
Colonies	11

Economy:

The United Americas has the largest and most technologically powerful economy in the UEF. In this market-oriented economy, private individuals and business firms make most of the decisions, and the federal and state governments buy needed goods and services predominantly in the private marketplace. GDP: E\$ 84.9 trillion.

Description:

Second most powerful member state of the United Earth Federation with a strong economy and at the cutting edge of technological advancement, the United Americas was formed in 2084, a year before the foundations of the global government were laid. The United Americas consists of the USA, parts of Canada, Mexico and Central America. As such is run by a President, Vice President, and a Congress representing all member signatories. On the Frontier, any encounter with UA leadership is likely to be with a Colonial Marshal or a bureaucrat from Colonial Administration.

The United Americas remains the cultural melting pot that it was at the turn of the 21st Century, its population consisting of a diverse array of ethnic and social groups. Although seeming very much like a model of racial and religious integration on the surface, the United Americas has all the same social problems that it has always had. Many outside the UA consider the nation to be politically corrupt, with the Corporations having much of the real power.

In reaction to this rampant corporate consumerism, religious Conservatism has been on the rise in the United Americas, notably the New Confederate Church of America, a Baptist offshoot which is gathering support among many high-ranking Republicans.

Along with the Chinese Consortium, the United Americas is at the forefront of the UEF interstellar colonisation programme. While the UEF is not controlled by Weyland-Yutani or Hallidor, the companies business holdings with the United Americas Allied Command means that the Colonial Marines can be called upon to provide security to W-Y or Hallidor assets at any time – a fact that doesn't sit well with many a platoon commander.

The Eurasian Rimworlds Combine (ERC)



Politics	Authoritarian; Fascist Dictatorship
Population	Earth: 42.7 million (approx)
	Space: unknown
Colonies	Exact number unknown: in 2260 the ERC controlled 5 star systems

Economy:

The ERC is one of the most centrally planned and isolated economies, and faces desperate economic conditions after over a decade of sanctions from the ICA and ICC.

International Relations:

Unofficial ceasefire in effect with ICA. No official diplomatic relations with any of the other colonial powers.

Description:

A group of star systems at the outermost of the European and UPP colonised arms, the rebel colonies that make up the Eurasian Rimworlds Combine (ERC) seceded during the Colonial Wars of 2258-2260, and the region has been a galactic hotspot ever since. Locked in an ever-escalating arms race with the Federation, the UPP has always managed to stay only one step behind them despite the fact that they will not deal with corporations. At the time of its inception, many androids were already in use within the member states of the ERC. They were not, however, granted citizenship status of any kind. Now, over sixty years later, they are still just considered machines and the property of the state.

The leaders of the ERC have refused to sign a treaty with the ICA, granting them substantial autonomy – demanding instead recognition and total independence, something that the ICA were unwilling to give. An unofficial ceasefire has been in effect since 2260, with a 1 parsec DMZ established between ERC and UEF space. Any civilian craft that enters the DMZ without authorisation space is boarded and searched. Any military craft traversing through without authorization can be considered an act of war.

The ERC is obsessed with securing more space and its aggressive tendencies has warranted many corporations to refuse trade. Unlike the FWA, the ERC is not a democratic society but rather a fascist dictatorship bent on technological advancement. Despite political isolation, the ERC has an active intelligence network both inside and outside of its borders. Their agents have gained access to high levels of government and corporate information. The ERC monitors insurrections on separatist colonies within ICA space and covertly supports them where appropriate, to both further their own political goals and destabilise their enemies internally.

Most of the ERC's offensive starship capability is made up of ColSec and ICM craft captured during the Colonial Wars 11 years ago. They have recently begun manufacturing their own craft, however. The elite commandos of the ERC are known as the Space Operating Forces. Said to be roughly equivalent to the Interstellar Colonial Marines, the SOF has a similar regimental breakdown. They maintain a fleet of warships and transport vessels, have their own dropships, and use massive, two-story armored trucks for troop deployment.

A national security agency and a secret police, the FES gathers both internal and external intelligence for the good of the Eurasian Rimworlds Combine. The Ministry Eurasian Security Police maintains a number of operatives throughout the Frontier, undercover on both ERC controlled worlds and UEF colonies. FES spies have infiltrated top corporations and stolen their military designs. They monitor their own citizenry to make sure they stay true to the Combine. In the ERC, they say trust your enemy to be your enemy, but never trust your neighbor to be your friend.

The ERC is in a state of cold war with the UEF. Over the last decade, limited engagements have seen border worlds change hands or even be destroyed. Some five years ago, a regime change on the independent world of 8 Eta Boötis A III led to what became known as the Tientsin campaign – a bloody conflict where the UEAF backed an independent planet's attempt to keep an ERC aligned government from taking power. The conflict decimated the once lush world and left it in ruins.

The Free Worlds Alliance (FWA)



Politics	Democratic Republic
Population	Earth: 58.43 million (approx)
	Space: unknown
Colonies	9

Economy:

The ICA imposed economic sanctions upon the worlds of the FWA and established a blockade at the official end of the Colonial Wars (2260). The FWA's economy struggled but survived, and is now almost self-sufficient.

International Relations:

Unofficial ceasefire with the ICA.

Description:

The FWA is a loose alliance of worlds that have claimed independence from any interstellar governing body. As humanity's reach stretched into the Outer Rim during the 2200s, more and more colonies became dissatisfied with the support they received from their governments. Colonial administration was understaffed and overworked. Supply lines were late and the ICM and marshals were spread too thin. Some colonies decided to declare themselves independent, but with no corporate giant behind them.

In the spirit of free commerce, the Alliance reinvented themselves as the Independent Core System Colonies and extended their reach past the core systems to offer support to any colony that wanted its freedom – and could afford to pay the FWA's protection fees. Because the FWA is outside of any governmental jurisdiction, individual planets set up their own rules. Several large banks and credit companies have settled here, providing security and bonds for corporations whose shady dealings might otherwise have their accounts frozen for government investigation.

Apart from the Eurasian Rimworlds' Combine, this group of independent colony worlds in the region of space known as the 'Herculis Cluster' is the only holdout from the Colonial rebellions. It is isolated from the rest of Federation space by the military blockade maintained by the UEAF.

The capital planet, Ernesto Prime, has a population approaching 30 million, and was originally owned by Hallidor Corp. Designated a Class One Planet by the ICA, Ernesto Prime is a democratic republic, self-sufficient in air, food and water, and is rapidly industrialising, to compensate for the loss of trade imports from the Core Systems.

The Federation has imposed trade sanctions and severe import and export taxes on the FWA. A major UEAF base is located just outside the FWA – in part to keep a watchful eye on the independent systems, but also because some major companies want the Colonial Marines close in case of an invasion of the FWA by the ERC. Outside the Core, the FWA services, protects, and trades with a smattering of independent worlds in the Outer Rim and smugglers regularly run the Federation blockade to sell goods to the FWA.

Criminal Organizations

These groups make the provision of contraband goods and services their business. There are many criminal groups operating on Earth. Criminal organizations tend to be run more like guerrilla cells than like the syndicates or street gangs of the 20th century, due to the vastly enhanced surveillance capabilities available to police. Most crime bodies (triads, Families, cartels, etc.) are set up in pyramids of cells, each cell having no more than a dozen members. An individual crime-cell member usually only has knowledge of two or three other cells (depending on his rank and position). Communication between cells relies on strong encryption running through data havens.

Estrella Negra

One of the most powerful crime syndicates operating in Circum-Jove is the Estrella Negra (the Black Star). A cartel of organised crime groups originating for the most part in South America on Earth, Estrella Negra has a lot of influence among immigrants to Circum-Jove from Latin America. Despite the best efforts of FLEA and the Colonial Marines, this organisation continues to run sizable drug smuggling and people trafficking operations to the Circum-Jove colonies.

Estrella Negra is known to exert a great deal of influence among the poorer social classes, and have government officials and cops on the payroll. As yet, FLEA has been unable to locate La Catedral – the infamous headquarters of Pedro Ignacio Ramirez, head of the Estrella Negra Circum-Jove Cartel.

Martian Triads

This Mars-based crime syndicate has recently expanded into the Main Belt and L5. The Triads specialize in bioroid trafficking and manufacture: they sell pleasure models to space crews (especially freehaulers and asteroid prospectors) and combat models to the ERC and FWA. There are (hidden) Triad offices in most places in the Sol System, but their main birth-lab factories are scattered throughout the Belt, often on small "gas station" outposts. The Martian Triads also run protection rackets for gas-station operations and provide high-interest loans to desperate gas station owners and freehaulers... many of whom end up paying their debts by supporting Triad operations (e.g.. through smuggling).



Cappello Nero

The Capello Nero is a Mafia-terrorist-type organized crime syndicate. It is a loose association of criminal groups that share a common organisational structure and code of conduct. The basic group is known as a "family" or cosca. Each family claims sovereignty over a territory in which it operates its rackets. Its members call themselves "men of honour", although the public often refers to them as mafiosi. The Mafia's core activities are protection racketeering, the arbitration of disputes between criminals, and the organizing and oversight of illegal agreements and transactions.

Following waves of emigration, the Mafia has spread to the Core Systems.

The Red Dragon

The Red Dragon is a transnational organized crime syndicate originating in Japan and form the street-level enforcement arm of the Second Church Of Ashago. The Red Dragons members are notorious for their strict codes of conduct ensuring that nobody challenges the syndicate's supremacy in the criminal underworld. Their methods are usually deterrent-based; making a single, gruesomely bloody example of those who try to muscle in on Seaborne Foundation operations often does more than a dozen relatively clean hits.

Organising themselves into extremely close-knit gangs, which they refer to as 'clans', the Red Dragon represent a living nightmare for the authorities; street toughs with corporate backing. ColSec security and even the FLEA are often rendered impotent by these well-equipped, well-financed and utterly unreasonable hoodlums.

Terrorist Groups

The People's Revolutionary Army (PRA)

Terrorist Group operating in the Outer Rim Territories. Thought to be financed by the Eurasian Rimworlds Combine.

The People's Revolutionary Army (PRA) fight a guerrilla war against the UEF in the Outer Rim Territories in the Colonial Wars of Independence. The border campaign, as it became known, involved various military columns carrying out a range of military operations, from direct attacks on security installations to disruptive actions against infrastructure.

The use of weapons of mass destruction (nuclear, chemical, biological, or nanotech weapons) remains a widespread fear, but most attacks still rely on more traditional means. Conventional bombs, whether a bomb-jacked remote carrier, or planted in an innocuous location in public, remain the terrorist weapon of choice.

The Islamic State of Earth and the Levant (ISEL)

Terrorist Group operating in the Sol system. Thought to be financed by the Islamic Holy Republic.

The Islamic State of Earth and the Levant (ISEL) is a Salafi jihadist militant group. ISEL is widely known for its videos of beheadings and other types of executions of both soldiers and civilians, including journalists and aid workers, and its destruction of cultural heritage sites. The UEF holds ISEL responsible for human rights abuses and war crimes. ISEL promotes religious violence and believes that only a legitimate authority can undertake the leadership of jihad, and that the first priority over other areas of combat, such as fighting non-Muslim countries, is the purification of Islamic society.

The group uses truck and car bombs, suicide bombers and IEDs (Improvised Explosive Devices), and has used chemical weapons. ISEL captured nuclear materials from a dead zone in 2266, but is unable to convert them into weapons so far.

Earth Isolationist Movement (EIM)

An Earth-based activist group calling for the total cessation of all terraforming activity on Mars, the Isolationists are known best for their use of environmental terror weapons. Starting in the mid-21st century, the Earth Isolationist Movement began using "areoformers" to turn local areas of Earth into rough approximations of the pre-terraform Martian surface. Little is known about the group, other than its clear expertise with advanced environmental technology. They are believed to be an Earth-based offshoot of the Earth Children cult.

This is a violent preservationist group, dedicated to ending terraforming, reversing it where possible, stopping immigration, and allowing the human population on Mars to slowly decline. They favor orbital habitats, and allowing scientists and rare visitors on the surface, but in the long run want to see Mars essentially depopulated.

Time Line

The 21st Century



In the early decades of the 21st century, as fossil fuel production peaked then began to fall there was a global scramble for the dwindling reserves of oil, natural gas, minerals, and clean water. Governments throughout the world defined resource security as a prime objective, which caused widespread global instability, especially in those regions where competition for essential materials overlapped with long-standing territorial and religious disputes.

As the century progressed the political map of Earth was to change dramatically. New superpowers emerged to challenge the world dominance of the USA, with the most notable among these being China. Even the USA wasn't immune to

change, uniting with Canada, Central America and parts of South America to form the United Americas, in direct response to the shifting economic climate.

By the middle decades of this century the global energy crisis was averted by the discovery of nuclear fusion, and Humanity also took it's first tentative steps towards colonising the solar system, but the real start of the Interstellar Space Age would have to wait until the dawning of the 22nd Century.

Perhaps the most important event of the 21st Century was the formation of the United Earth Federation.

2026: Jerusalem Accord signed

A coup backed by elements of the army deposes the current hardline Israeli government bringing an end to the Fifth Middle East War. The war was not fought over religious beliefs or territorial disputes as in the past. In 2022 Syria, Jordan and Israel went to war for the limited water resources delivered by the Jordan River.

The United Nations step in to broker a peace deal between Israel and the Arab states in the region.

The Israeli occupied West Bank becomes the nation of New Palestine while Jerusalem becomes an independent city much like 20th Century Kosovo. United Nations peacekeepers are deployed in Jerusalem for an indefinite period.

2029: The European Federation

Formation of the European Federation; Final dissolution of NATO.

The USA's unrelenting support of Israel during the Fifth Middle East War causes NATO alliance to unravel. This clears the way for the formation of the European Federation from the member states of the European Union.

The European Federation is a Federal super-state of more than 40 countries stretching from Iceland to the Caspian Sea. As well as the obvious member states, it includes the Balkans, Belarus, Moldova and Ukraine, and the Caucasian states of Armenia, Azerbaijan and Georgia. Turkey's membership gives the European Federation a direct border with the troubled Middle East.

The Trade War of 2017 had already driven a wedge between America and Europe. The events during the Fifth Middle East War push the UK and other ex-NATO countries into full membership of the European Federation, despite not fully accepting all of it's policies. This puts an end to the once treasured 'special relationship' between the Americas and UK, that has existed since WW2. Relations between the USA and UK will remain strained for several decades, but cooperation during the colonisation of the Moon restores ties between the two nations.

2030: World Bank declares bankruptcy

Earth's fossil fuel based economy reaches breaking point. With major oil reserves dwindling rapidly, on 23rd November 2030, the World Bank declares bankruptcy. Global Economy collapses, leading to civil unrest around the world. Rioting and looting breaks out in major cities across the globe.

2031: Nuclear Fusion

The Tokomak fusion reactor at Cardarache in France is demonstrated to be safe, economically competitive and infinitely upscales. The breakthrough pulls the world back from the brink of global anarchy and social meltdown. The advent of cheap, safe and virtually limitless energy significantly shifts the balance of power on Earth.

During the next decade there is a transitional period, as global economies and infrastructures change. By 2043, most of the world's energy needs will be met by fusion power. Regional wars are fought over the planet's depleted oil reserves. The UN places a ban on the burning of fossil fuels and starts a compulsory recycling scheme of ALL plastic waste, as remaining reserves are designated for use in manufacturing of plastics, PVCs and UPVCs.

2033: Formation of the Islamic Holy Republic

Unification of Iraq/Iran sees formation of the Islamic Holy Republic, with it's capital in Tehran.

2034: Lunar Landings Redux

Humanity returns to the Moon after an absence of almost 65 years. The Capricorn V landing is the first of a series of missions that are part of a commercially-backed project by the newly established United Nations Space Administration (UNSA) to prepare the way for a permanent Lunar colony. The main functions of the colony will be scientific research and to conduct a geological survey of the Lunar Regolith with a view to finding the best site to begin mining Helium-3. The first generation of fusion reactors run on Deuterium-Tritium fuel, but a new wave of Helium-3 fuelled reactors are seen as the way forward to secure Earth's growing power needs.

2040: Vanishing of the Event Horizon

The Event Horizon is launched into space to test a new propulsion system that permits instantaneous travel between points light years apart by folding space and creating a gateway. The Event Horizon disappears without a trace and mysteriously reappears seven years later orbiting Neptune. A rescue ship, the Lewis and Clark, is dispatched to investigate with Dr. William Weir on board, the designer of the Event Horizon. The Event Horizon was found deserted and the rescue mission failed in strange manner.



2057: Lunar colony established

Armstrong, the first permanent Lunar colony is established at the Copernicus Crater. The colony is nominally under UN Mandate, but it is primarily a joint American, European (UK and France) and Japanese venture. Initial population is 150.

In the absence of any legally binding agreement governing the mineral exploitation of the moon, the megacorporations who financed the colony stake claims to large regions of the lunar nearside which selenologists believe harbour commercially viable ore deposits.

2059: Commerce arrives in outer space

The powerful Japanese corporation Motokatsu-Kyono Combine begins successfully mining helium-3 from the Mare Imbrium. It sparks a wave of commercial interest in the Moon. Within 10 years, at least a dozen corporate concerns are involved in mining substances abundant on the lunar crust but scarce on Earth. These include helium-3, which is the ideal fuel for fusion reactors, gallium, which has replaced silicon in the making of chips, chromium, aluminium, iron, oxygen, gravidium and super-hard titanium.

2061: The Mars Landings

4 July: UNSA spacecraft Ares 3 lands on Mars with a multi-national crew of 4 (American and Chinese). Utilising an advanced fusion drive the journey to Mars take little more than 2 months.



2071: Ares station operational

Ares station on Mars is now manned by 51 personnel. Stickney Base, a waystation for supply missions from the Earth-Moon system, is constructed on Phobos, larger of Mars' two moons. The Armstrong Luna Colony now has a population approaching 400. With up to a dozen commercial mining bases scattered across the moon, the total Lunar population is close to 1000.

2074: The Luna Crisis

A dispute over water mining rights at the Clavius Crater between rival corporations Motokatsu-Kyono and the recently formed Lunar Development Corporation (LDC inc) escalates to the brink of the first armed conflict in space. Water ice provides the Lunar Colony with drinking water, oxygen and hydrogen for use as rocket fuel. Motokatsu-Kyono blame LDC for the "software bomb" that wreaked havoc at it's Tokyo headquarters. The corporation threatens "retaliation" if its suspicions are confirmed. Both corporations begin evacuating non-essential personnel from their mining operations, while shipping security personnel from Earth. Reacting to the possibility of armed conflict on the Moon, Helium-3 prices on Earth begin to rise. Helium-3 is rare on Earth but relatively common on the lunar surface.



Before events can escalate out of control, the UNSA manages to negotiate a peaceful settlement to the Lunar Crisis. As a direct result of the Lunar Crisis, the UNSA is given the mandate by the UNSC to establish the Lunar Security Force (LSF), a small detachment of soldiers and security specialists, tasked with keeping the peace and mediating any disagreements. In addition the Outer Space Treaty is revised, preventing any one organisation restricting the supply of a vital resource like water to other organisations.

2084: Formation of the United Americas

United Americas formed. It initially encompasses the USA, Canada, Central America and parts of South America.

2085: The United Earth Summit

Geneva, 1st January 2085: The United Earth Summit is attended by Australia, China, the European Federation, Japan, New Zealand, the Russian Republic, South Africa, and the United Americas. The nations attending the summit propose that the United Nations Constitution be radically ratified. These proposals in effect dissolve the current UN, replacing it with the United Earth Federation (UEF). The nations who become signatories to the United Earth Constitution of 2085 become member-states of the first unified global government, an economic and political conglomerate committed to uniting the nations of Earth in preparation for the continued colonisation of Luna, and the planned colonisation of the planet Mars and the rest of the solar system.

This move sparks several conflicts (the Unification Wars 2085-2102), primarily fuelled by nations who refuse to be a part of the global super-state. The newly formed United Earth Federation ratifies a treaty of United Earth Armed Forces (UEAF), a cohesive fighting force to stop these and future wars, with troops and equipment supplied by all member states, under one general command staff comprising of highranking officers of all nations. The biggest armies in the UEAF include EuroCorps, AmeriCorps, ChinaCorps, AsiaCorps and troops from India and Latin America.

2086: Formation of the The Chinese Consortium

Formation of the The Chinese Consortium from China, the Indonesian Consortium, Vietnam, Cambodia and (with some reluctance) North Korea. Many believe it's formation is in response to the formation of the United Americas two years earlier.

2087: South American War

A frighteningly potent alliance between the Revolutionary Armed Forces of Colombia (FARC), and the National Liberation Army (ELN) threatens to tip the balance of power irretrievably towards the drug barons. At the request from the Columbian government, the United Americas increases it's military aid package to the country.

When Marxist guerrillas attack the UA Embassy in Bogotá, killing the American ambassador and 33 of his staff, the United Americas is drawn into a messy war, sending troops to fight alongside the Columbian troops against the guerrillas, who control much of the country's cocaine and heroin-producing regions.



2091: Antarctic-Gate

When a United Americas company is found to be secretly drilling for oil in the Antarctic Nature Reserve, it leads to a major scandal in Washington, later to be dubbed 'Antarctic-Gate'. A UEF inquiry unearths evidence of corruption at the highest levels of the United Americas government. The Anderson Presidency is left in ruins, as many of his senior staff are implicated.

2094: The Shackleton Disaster

Disaster strikes the Lunar colony when a transport loaded with water-ice mined from the Shackleton Crater crashes on take-off fracturing the main dome of the Shackleton Mining Base. Before the ruptured sections can be sealed off, 23 people die from exposure to vacuum and a further 44 suffer serious injuries. During the subsequent investigation into the accident it is discovered that the transport suffered a catastrophic systems failure due to a history of poor maintenance. The United Earth Federation in conjunction with Lloyd's Space Shipping pushes through new legislation designed to ground any ships that do not meet basic safety standards.



2098: The Lunar Express

Construction starts on the Trans-Lunar Express, a high-speed monorail system connecting the major colony sites.

The 22nd Century



The 22nd Century saw the start of the true Space Age, with the invention first of the reactionless displacement drive, then the jump drive. By the end of this century, humanity had achieved amazing wonders, including the colonization of the solar system, but had also continued its warmongering ways, notably in the nuclear Russian Civil War, and the Tau Ceti War.

2101: The Foscolo Discontinuity

European physicist Hugo Foscolo discovers what will come to be known as the 'Foscolo Discontinuity'. The theory radically rewrites Einstein's theory of relativity and the physics of gravity. It postulates that there are at least nine dimensions above the five we know, and that spatial physics work differently in these higher dimensions. Possibilities include interstellar travel in a vastly shorter time and manipulation of the Zero Point Field, both longtime goals of scientists.

2102: Zero Point Field Theory

Hugo Foscolo's groundbreaking discoveries concerning Zero Point Field Theory result in the development of the reactionless displacement drive, which allows quick and cheap space travel within the Solar System. The first mission to Mars on a ship powered by the Foscolo RD drive takes a mere 17 days.

2106: Mars Terraforming Begins

UNSA issues major contracts for corporate investment in the colonisation of Mars. Earth's largest megacorporations rush to get involved.

The melting of the southern polar icecap using orbital mass drivers releases large quantities of carbon dioxide, causing an increased greenhouse effect, raising the average surface temperature of the planet. In addition dark microbial life forms and lichens specifically engineered for the Mars Terraforming project are spread across the surface, increasing the albedo of the red planet and consequently upping the amount of solar radiation captured by Mars as heat.



Atmospheric processors are set up across the planet. Genetically engineered biomass is seeded across the planet in vast quantities. The aerobraking of captured comets cause outgassing of gasses into the atmosphere.

Consolidated Aerospace founded by Saul Petersen and Alexander Liu.

2107: The Colonisation of Mars

Initial construction is completed at Viking City, the first Martian civilian colony. The city is located in and around the Mie Crater, a large basin formed by asteroid or comet impact in Utopia Planitia. Initial population numbers 936. With a population fast approaching 10 billion, food riots in most countries and a biosphere contaminated by the burning of fossil fuels and use of dirty nuclear power (i.e. fission), the colonisation of the solar system is seen as the key to the eventual regeneration and uniting of Earth.

Advances in solar energy technology results in development in lower latitudes of the world. The Central African Bloc is established.

2108: Development of FTL Communications and Suspensor field technology

Scientists in a Taiwan laboratory succeed in transmitting information faster than the speed of light utilising tachyons. Calculated at travelling nearly 3.26 light years in one Earth day, near instantaneous communications is now possible with the fledgling Mars colony.

First baby born on Mars.

The first working gravity-field generator is activated in San Francisco. This makes artificial gravity fields possible on the larger starships.

2109-2119: The Phobos Project

In the wake of similar projects on Earth nearing completion, the construction of a Martian space tether is seen as essential to the economic development of the fledgling Mars colony. A space tether would dramatically reduce the cost of moving stuff up and down the planet's gravity well. With the technology already tried and tested on the two Earth space tethers, a consortium of corporations involved in the Mars colonisation program gain UEF backing to initiate the Phobos Project.

Building the Martian space tether would be a herculean engineering effort and a unique challenge – primarily because of the choice of the Martian moon Phobos as the tether anchorpoint. Until the construction of the tether Phobos was in a low orbit, intersecting the equator regularly (twice every orbital period of 11 h 6 min). It is decided early on that a collision between the elevator and the 22.2 km diameter moon would have to be avoided by moving the moon itself out of the area, and if they were going to move the moon, why not use it as the anchorpoint?

Within months of the project being greenlit, rockets and mass drivers are attached to Phobos, and begin firing. Slowly the moon's orbit is arrested and its orbital distance increased. Within eighteen months it arrives in a geo-stationary orbit over the Martian equator. Automated manufactories on the surface of the moon begin using the moon-rock to construct the bundles of carbon nanotubes that will become the tether. The caverns created by the tunnelling will later be pressurised and form part of the subterranean portion of John Carter Space Port.

It will be another eight years before the tether touches down at the base station atop Pavonis Mons on the surface of Mars. Anchorpoint, the town that grows up around the base station, quickly becomes a large transit facility and the second largest colonial settlement on the planet.



2110: Project Ceres

Hallidor Corporation presents Project Ceres to the United Earth Federation Space Agency a bold plan for the colonisation and mining of the asteroid belt out beyond Mars. The plan is approved. Hallidor launches two prototype deep space mining craft, Rameses I and II, the same year.

2111: Colonisation of the Belt

Project Ceres is a success. Rameses I establishes Ceres Base, a permanent mining colony, from where Hallidor subsidiary Ceres Metals begins surveying other asteroids. Rameses II tows the first nickel-iron asteroid back to Earth L4 for strip mining. Within another year half a dozen other corporations and at least 20 private investors have staked claims in the asteroid belt and begun mining operations. The development of permanent mining colonies in the Belt is seen as a vital source of raw materials for the fledgling Mars colony.



2112: Hugo Foscolo passed away

Hugo Foscolo dies ages 82.

2113: Development of the F-Drive

Expanding on principles behind the Foscolo Discontinuity, a consortium of scientists from the European Federation and Japan turn the dream of interstellar space travel into an achievable reality with the development of technology capable of punching a hole into the higher dimensions postulated to exist by Hugo Foscolo. Scientists successfully transport living matter from their Kyoto research labs to a facility on the Lunar Far Side. The extra-dimensional region it travels through is dubbed 'F-Space' in honour of Hugo Foscolo. Physics in F-Space work differently than in realspace, allowing matter to travel great distances in a relatively short period of time. Scientists calculate that a spaceship equipped with the ability to enter, traverse and exit F-Space could travel the equivalent of 1 parsec in an Earth week.



2115: Flight of the Foscolo

Using a Foscolo Star Drive (F-Drive) powered by the rare element Ununpentium (Element 115, later dubbed Foscolium), the UEFSA spaceship Foscolo makes the first interstellar flight to Alpha Centauri by opening a portal into F-Space, traversing this region and emerging at pre-calculated coordinates. At a distance of 4.39 light years from Earth, the Foscolo makes the journey in just over one Earth week. After a week-long communications blackout, the first news from the Foscolo crew reports a successful F-Space journey, which deposited the ship at the edge of the Alpha Centauri A planetary system. After several days of realspace travel inbound to the system, the crew report the discovery of an Earth like planet orbiting Alpha Centauri A. This sparks what is now known as the first wave of interstellar colonial expansion from Sol (or the First Exodus), as thousands of people seek to escape from the troubles on Earth to the new 'frontier'. Suddenly space exploration becomes a commercial industry, and several of Earth's larger corporations begin to fund space exploration and colonisation efforts. As interstellar distances increase, cryosleep becomes a necessity of interstellar travel. Ununpentium mining becomes almost as big business as Helium-3 mining.

The early years of space exploration see a rapid increase in the power and influence of multinational Corporations (now referred to as Megacorps or Metacorps). They are not defined by country, society, or ideology. In industry, in business, and in the media, the multinationals become ever more powerful and more visible.

2116: The Saturnian Project

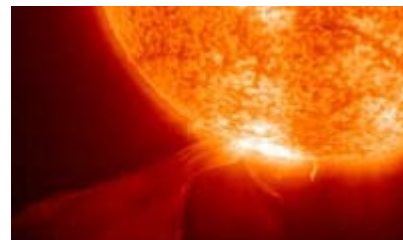
A UEFSA colonial mission lands on Titan, largest of Saturn's moons. Images sent back show the shores of a liquid-methane ocean beneath a bright orange photochemical smog. The ocean is a witch's brew of life-creating molecules, but at a mind-numbing low of -178°C. It is deemed perfect for a long-term terraforming operation. The initial colony base, once established has a population of 246.

2118: The Jovian Project

The UEFSA Jovian Project establishes colony bases on the Jovian moons Callisto, Ganymede, Io and Europa. The primary objective of these bases is to serve as supply bases for a fleet of mobile mining platforms being constructed to mine Jupiter's Helium-rich upper atmosphere.

2120-2146: Maunder Minor

Earth's sun dims, repeating a behaviour first exhibited in the seventeenth century, though this time to a much lesser extent. The economies of those nations who rely heavily on solar power find it hard to adjust, with agriculture and power-generation severely handicapped. The resultant social upheaval forces many to look to find work offworld, as colonist-workers in the fledgling Jovian and Saturn colonies.



2127: Emigration to the Jovian moons

Early success in the Jovian mining operations and a large influx of migrants from Earth causes the colonies on Ganymede and Europa to expand much quicker than initially projected. Construction begins on what will eventually become the Hanging Cities of Europa.

2128: The Bolivian H2 Alpha super-flu pandemic

Outbreak of the Bolivian H2 Alpha super-flu strain across Central and South America on Earth. Bolivian H2 Alpha, nicknamed the "Sterility Plague", rapidly goes pandemic. Earth is quarantined by the UEF in an effort to stop the plague spreading to the fledgling offworld colonies. By the time Bolivian H2 Alpha is brought under control with a vaccine developed by the Japanese firm Zen Medical, it has claimed 114.3 million victims. Over a billion people become sterile as a side effect of the plague.



2134: Development of the Fecundity 5 vaccine

A scientific breakthrough by Zen Medical enables the repair of damage done by the Sterility Plague at a genetic level. With fertility restored, Earth suffers a minor population explosion.

2135: Consolidation

All the star systems within 12 light years of Earth have been explored, and their planet's surveyed. Colonies or terraforming operations have been established in each system. Up until this year Earth's space exploration and colonisation programme has been unified under the flag of the Federal Colonies.

Greed, as ever, brings this delicate alliance to an end, when the United Americas and Chinese Consortium separately begin their own colonisation programs, out beyond the Core Systems. They are soon followed by the European Federation, Russian Republic and Japan. The majority of colonies are part-financed by powerful multinational corporations, without whom the colonial powers couldn't operate.

2136: Territorial Disputes on Mars

During the early decades of the 22nd Century, land-grabs by competing megacorps on Mars lead to territorial disputes, the largest and most famous of which is now known as the Tharsis Dispute. The Tharsis Dispute is sparked by an incident on the Tharsis Bulge, when fighting breaks out between corporate security teams from rival megacorps EnerTek Corp and Cheung Corp. Both corporations immediately begin hiring and transporting military assets to the red planet.

Worried that the violence will spread, the UEF sanctions the deployment of peacekeeping troops to Mars to act as a buffer between the two megacorps mining the Tharsis Bulge.



2138: The Tau Ceti War

Rival megacorporations EnerTek Corp and Cheung Corp clash on the planet Anjuna in the Tau Ceti star system. Territorial disputes between the two corporations on Mars two years earlier persuaded both to hire mercenaries to help protect colonial assets out beyond Sol. At first the fighting is localised to a handful of contested sites, but tit for tat revenge attacks by both sides quickly causes matters to escalate out of control. Undercover support flows in from Chinese and American factions on Earth, resulting in the conflict spreading and deepening across the system.



2140: The Colonial Act

The Viking Treaty of 2140, signed at the Mars Colony, brings an end to the fighting at Tau Ceti after almost 18 months of conflict. The breaking point for the UEF came when mercenaries in the employ of Cheung deploy tactical nuclear weapons against opposing EnerTek forces at Kow-Lang, resulting in the deaths of over a thousand civilian colonists unable to escape the war-zone. The security council sanctions the despatch of a UEAF taskforce to Tau Ceti, to protect the civilian population and to contain and stop the fighting. The peace accord is brokered by the UEF, and though neither of the protagonists is entirely satisfied with the outcome, prolonging a war that shows no sign of victory for either side is financially unacceptable. Anjuna is policed by a large and permanent UEAF garrison.

The end of the Tau Ceti War sees many unemployed mercenaries and mountains of military equipment disappear into the Outer Colonies. The conflict also shows that the UEF is simply not organised or equipped to police and govern the every growing number of colonies and shipping lanes out beyond the Core Systems.

The Colonial Act of 2140 places Earth's extrasolar colonies under the control of the newly formed Interstellar Colonial Authority (ICA). Each colony under UEF control has an ICA presence. On some of the newer colonies it is little more than a small Settlement Welfare Team office with a handful of representatives. On larger, more established colonies e.g those at Alpha Centauri, there is a large established ICA administrative presence. Larger colonies also sometimes have regional ICA headquarters.

Interstellar distances have to allow for a necessary devolution of certain powers to local leaders, which allows the elections of local officials by the colonial population. Despite this, the local ICA Administrator is able to dictate policy should he see fit. It is common practice for megacorporations with invested interests in a colony start up to have representatives on local councils.

The ICA is backed by the Colonial Security police force (ColSec), a new arm of the Federal Law Enforcement Authority. In addition to this new colonial police force, a new arm of the UEAF is created: the Interstellar Colonial Marine Corps (ICM). An Interstellar rapid deployment force, the ICM is designed to be able to mobilise quickly to resolve military disputes and keep the peace in the Colonies.

To regulate interstellar commercial shipping, the WTO is expanded and remodelled to form the Interstellar Trade Commission (ITC). All commercial flight crews must hold an ITC licence.

The Tau Ceti star system is absorbed into the Core Systems, over which the Federation continues to maintain direct control.

2146: Earth Isolationist Movement

A bomb planted by Earth Isolationist terrorists, kills 87 colonists in Viking City on Mars. UEAM (United Earth Army Mars) MarsCorps garrison established.

The three companies operating on Titan and among the moons of Saturn merge to form the Titan Corporate Collective (TCC) or TriCorp, the thirtieth anniversary of Titan's colonization (fuelling a renewal of the rumour that the colonization of Titan was the result of a competition between three wealthy investors).

2147: Break-up of Microsoft Corp

Break-up of Microsoft Corp by it's CEO Tabitha Gates. The biggest company formed from the break-up is 'Artificial Life Incorporated'. This company spearheads groundbreaking research into artificial intelligence.

2148: Artificial Intelligence

Artificial Life Incorporated unveils 'Adam' the first ever self-aware computer. The New Confederate Christian Church of the United Americas, one of the fastest growing religions of the 22nd Century, denounces Adam as blasphemy.

2148: Last stand of the Butcher of Kow-Lang

The UEF succeed in tracking down Tiberius Lee, ex-commanding officer of mercenary unit the Star Tigers. Lee is held responsible for ordering the tactical nuclear strike during the Tau Ceti War that resulted in the deaths of almost 1200 civilian colonists at Kow-Lang on the planet Anjuna.

Lee is arrested after a fierce 10 hour battle with Colonial Marines at his fortified compound on Titleman's Rest in the Ross 780 star system.

2149: Seas appear on Mars

The population on Mars begins to grow very quickly, prompting an increase in terraforming and the construction of new and larger colony pyramids (all large buildings on Mars are pyramid shaped, designed as the best defence against the sometimes harsh Martian weather). Cargo ships transporting ice from the asteroid belt and Jovian system arrive at Mars weekly.

The Martian northern polar icecap is partially melted with the use of orbital mass drivers. Seas appear on Mars.

Consolidated Aerospace relocates to Mars. Construction of the Mars Orbital Shipyard commences.

2156: GRA established

The Genetic Regulatory Agency is established by the UEF. The GRA exists to investigate and prevent the abuse of human genetic engineering. Much of its activity involves monitoring scientific literature and making recommendations to policy-forming bodies. GRA operatives also do a great deal of police work, investigating genetics labs and cooperating with local police to enforce genetic laws.

2164: First commercial use of android technology

AI Inc develops it's first generation of commercially available androids humanoid machines running the latest in intelligent software design. Androids are always programmed for non-combat roles, such as piloting, driving, tactical assistance, or medical staff. Their capabilities are deliberately limited by behavioural inhibitors based on Asimov's famous 3 laws of robotics. Over the next decade, AI Inc sells licences to several corporations, allowing them to develop and produce their own models.



2166-96: The Second Exodus

With interstellar travel becoming safer and cheaper all the time, and the population of Earth rising, a second wave of colonial expansion begins as people try to escape the resource-drained homeworld of humanity. By the end of this period, all viable worlds in the area of space now called the Outer Colonies have been or are in the process of being colonised by the UEF via the ICA. Beyond the Outer Colonies, megacorporations are already exploring, surveying and staking claims to countless more worlds.

Most starships are almost completely automated by the end of this period, using state of the art computer systems, notably the Matriarch operating system developed by Artificial Life Incorporated. Starships require only a small human crew to perform duties such as orbital insertion and in-flight repairs.

2196: Aral Sea Conflict

The dwindling volume of the Central Asian inland Aral Sea sparks a conflict between Russia and neighbours Kazakhstan and Uzbekistan. The sea's decline was caused by the long defunct USSR's diversion of the rivers which fed the sea, leaving areas of arid, salt-laden dust that then polluted large areas of Kazakhstan and Uzbekistan.

2197: Russian Civil War

The Aral Sea Conflict, coupled with the failure of the Russian potato and wheat lead to food riots in St. Petersburg. The Russian government declares that because of declining economic fortunes it cannot afford to pay it's troops in the Volga-Ural regions and in the outer colonies. As a direct result of this action, General Poborski, leader of the Volga-Ural military, declares himself military governor of the region, with 70% of the armed forces under his command backing him. His first action is to block all tax revenues bound for Moscow, threatening the complete collapse of the fragile Russian economy.



Within days, government troops have clashed with the rebels, and fierce fighting is reported in and around the city of Yekatarinburg. By the end of the first week of fighting, with government forces gaining the upper hand, the civil war turns nuclear when General Poborski orders strikes against aerospace-bases surrounding Moscow. Five bases are destroyed using aerospace launched tactical nuclear missiles. Tens of thousands of people die in and around the bases.

Premier Zakharov immediately orders an escalation to strategic nuclear weapons. 14 STGBMs are fired from an orbiting spacecraft against rebel military targets inside the Volga-Urals. The death toll is estimated in excess of 250,000, with 80,000km² contaminated by radioactive fallout.

UEFSC meet in emergency session. A ceasefire holds, mainly because of the threat of a nuclear strike against Moscow itself by General Leonov, Russia's Far East Region military commander. Elements of the UEAF EuroCorps and ChinaCorps land in Volga-Urals and in Moscow, as part of a stabilisation force to make sure the ceasefire holds.

2199: Formation of the New Democratic Russian Republic (NDRR)

With the complete disintegration of the Russian Federation after the civil war, Russia's satellite states are all granted membership of the UEF General Assembly as separate states. Russia emerges as the New Democratic Russian Republic (NDRR). Alexei Leonov takes his seat in the General Assembly as the new leader of Russia.

The 23rd Century



The 23rd Century sees humanity continue to colonise space. The UEF begins to fracture at it's edges, resulting in the Colonial Wars.

2201: Strategic Arms Reduction Treaty

To prevent strategic nuclear weapons being used by colonial powers against colony worlds, the Strategic Arms Reduction Treaty of 2201 prohibits armed nuclear warheads larger than 100 kilotons from being carried by starships.

2205: NEXUS-1 introduced

The Tyrell Corp. introduces the NEXUS-1 model Replicant, a standard robotic android form covered with genetically-engineered human flesh.

2206: NEXUS-2 introduced

These are N-1's with a programmed personality.

2208: NEXUS-3 introduced

These are physically the same as N-1's and N-2's, but their programming is highly advanced, including basic emotions.

2209: Union of Progressive Peoples

The UPP is formed by a coalition of colonies led by China and Russia in direct response to the perceived threat of the United Americas. Additional members like Vietnam, Spain, Germany and several other Asian and Eastern European countries later joined. The UPP Frontier is overseen by a Governor-General and naval task force, and each colony has its own mayor. The UPP Frontier Governor in 2210 was Governor-General Pham Dinh.

2210: "The Battle of Tannhäuser Gate"

A NEXUS-3 combat team stages a bloody mutiny against the Tannhäuser Gate colony. The UEAF fought in the retaking of Tannhäuser Gate from the replicants.



2211: Replicants illegal on Earth

The Tannhäuser Gate incident prompted replicants as a whole to be prohibited on Earth. UEF orders all Replicants on Earth be taken off-world or destroyed within 28 days. Blade Runner units formed.

2212: NEXUS-4 introduced

Tyrell Corp. gets permission from the UEF to introduce NEXUS-4 Replicants in the off-world colonies, if some means can be devised for distinguishing them from human beings. The Nexus-4 was the most advanced replicant, but concern arose when a pleasure model murdered lab worker Lydia Kine.

2213: Piracy activities

Pirate activity becomes a more organised threat in the Outer Rim Territories. The two main pirate groups operate in the Herculis Cluster and in the Rimworlds Colonies.

2213: NEXUS-5 introduced

They are the same as N-4's but with mission-specific programming. The Nexus-5 was stronger, more agile, and at least as intelligent as its designers.

2214: The Auton Project

During the initial Alpha Prototype Distribution stage of its 5th Generation Androids, Artificial Life runs into problems. Some of the Fifth Gens are found to be too emotional and uncontrollable. The Auton Project is canceled shortly thereafter, and all existing Fifth Gen models are recalled.

2216: NEXUS-6 introduced

Tyrell Corp. secretly introduces NEXUS-6 models to off-world colonies. With a genetically-engineered human brain, their programming is so advanced, the designers fear they may eventually develop their own emotions. They counter this by programming them with a four-year lifespan.

2219: Death of Eldon Tyrell

In October of 2019, Roy Batty, a Nexus-6 combat model replicant led a group of replicants killed twenty-three people in an Off-world colony and hijacking a shuttle with the assistance of other replicants, Leon, Pris, Zhora, and two others. These renegade replicants killed the crew and set a course for Earth.

Roy Batty arrived at Tyrell HQ and killed Eldon Tyrell. As result, the rest of the unused or unsold Nexus-6 replicants were allowed to expire in storage.

2220: NEXUS-8 introduced

The Tyrell Corporation releases the Nexus-8 model, with a full lifespan. The Nexus-8 series were the final iteration of numerically-designated bioengineered humans. Nexus-8 replicants were used for Off-world warfare and tasks humans did not want to do on Earth.

2222: The Blackout

The quantum malware Crawling Chaos infects out 90% of AIs from the Solar System and the colonies. As a result, the world, mostly run by computers, crashed. Governments were forced to order the destruction of many Data centers and AIs to save humanity. EM pulses deleted or damaged untold amounts of data and knocked out most of the planet's financial institutions and industries. In the same time, the "Replicant Register" was erased.

Much of the devastation wrought to the Earth and its populace as well as on Mars, Luna, and in space. Nuclear strikes used against the SAIs killed millions and ravaged an already weakened ecosphere or destroyed critical infrastructure with just as lethal consequences.

In the aftermath, food supplies dwindle to a dangerously low level.



2223: Beginning of the Replicant Prohibition

The governing magistrates legislate an indefinite "prohibition" on replicant production by the Tyrell Corporation. All Nexus-6 models are decommissioned due to their 4-year lifespans. Due to the prohibition, Nexus-8 replicants are mandated to be retired, but some manage to go into hiding. This sent the Tyrell Corporation into bankruptcy.

2225: A major tsunami impacts Los Angeles

The construction of the Sepulveda Sea Wall is commissioned.

Scientist Niander Wallace solves Earth's food crisis by genetically engineering Nematodes, a species of artificial worm high in protein, that will become a primary source of food by the year 2249. The Wallace Corporation experiences a surge in growth as a result.



2228: Takeover of Tyrell Corp.

The Wallace Corporation purchases the now defunct Tyrell Corporation.

2232: Evolution of Man

An article is published in the New England Journal of Medicine, offering proof of the existence of telepathy. The UEF establishes the Metasensory Administration Agency (MAA) from the Committee on Psychic Phenomenon (CPP), headed by Senator Paul Fox, to oversee the Telepath situation.

Research undertaken verifies the existence of Telepaths. This begins a major panic.

2235: Internal Security Act

The UEF passes the Internal Security Act, establishing two quasi-governmental departments as branches of the MAA: MetaPol and PsiCorps. Attached to the Federal Law Enforcement Authority, MetaPol, or the Metasensory Police, is mainly made up of telepaths and precogs, who use their powers to interrogate those who have committed crimes against the Federation, or to predict the outcome of certain events. A quasi-military branch of the MAA, PsiCorps operatives are

usually assigned as 'psychic security' to government officials, or attached to UEAF units on missions that might benefit from the availability of psychic powers.

In addition, the Internal Security Act allows for the formation of Psychic Service Providers private organisations licensed and regulated by the MAA who hire out their talents to block telepathic snooping and other paranormal dirty tricks. It has become common practice for executives of large corporations and government bodies to employ such agents as 'psychic security'.

2236: End of Replicant Prohibition

Niander Wallace introduces his new Replicant model.

Niander Wallace meets with Los Angeles lawmakers in order to demonstrate the obedience of the Nexus-9 replicant by having one cut himself and choose between taking his own life or Wallace's. The Nexus-9 selects the former.

Replicant prohibition ends. The Wallace Corporation publicly releases the Nexus-9 Replicant model.

2238: Space Pirates Strike in the Core Systems

A cargo of gravidium, element 126, is snatched by space pirates while en route to Centauri Prime from Helada. The crime bares the unmistakable hallmark of the renegade Chinese Consortium space pilot Kim Chung Song and his band of disaffected followers. The stolen shipment is valued by Lloyd's Space Shipping at E\$9 billion. Up unto now his activities have been confined to the Outer Rim Territories along with the rest of pirate activity.

2240: The Sepulveda Sea Wall

To contend with global climate change, Los Angeles constructs the so-called "Sea Wall" to contain the rising waters, with some replicants being illegally employed for the project. Human-Replicant tensions continue to escalate.

2243: Capture of Kim Chung Song

Space pirate Kim Chung Song is captured after a dramatic 36-hour battle around and on several of the moons of Irsas, a gas giant in the Alpha Centauri system. The final confrontation takes place beneath the surface of the moon Irsas X, in the warren of lava tubes that honeycomb the moon, and involves more than 500 UEF soldiers.

Colonial Marines, fighting for the most part in vacuum conditions, suffer heavy casualties before cornering Kim Chung Song and 34 of his surviving cohorts. They are taken to Centauri Prime to await trial.



2244: Destruction of Kim Chung Song operations base

One of Kim Chung Song's surviving followers cracks under interrogation, giving up the location of Song's base of operations in the Core Systems: a converted colonial transport currently in the Sirius Star System. An ICM taskforce is dispatched to neutralise the pirate threat.

Locating the pirate stronghold, the taskforce succeeds in crippling the pirate ship before it can escape. Taking no chances, the marines decompress the vessel before boarding. By the time they have secured the ship there are few survivors among the crew.

2246: The EnerTek Scandal

EnerTek Corp declares bankruptcy, subsequently collapsing in a scandal involving billions of E\$ in losses, corporate power abuse and attempted blackmail of ITC officials. EnerTek Corp is the primary colonial investor in the Herculis Cluster, a sector of space with a high concentration of habitable and resource rich star systems in close proximity to one another. During the next decade, the Herculis Cluster colonies are allowed a degree of regional autonomy unprecedented by the UEF.

2249: The Mercenary War

Rival mercenary units clash in the Outer Rim, despite both having being hired by Cenargo Corporation to protect colonial assets against pirate activity. Both force's contracts are promptly revoked, but fighting escalates, forcing the Cenargo corporate forces to become involved.

The Mercenary War is finally brought to an end with the signing of the Mercenary Charter. The Charter, formulated by the ICA, lays out a code to which all mercenary units and their employers are expected to adhere. All signatories to the Charter, which includes most organisations that either supplies or employs foreign mercenary troops, agree not to hire any unit that does not comply with the terms of the code.

2250: Outbreak of the Ngano Plague

Outbreak of the Ngano Plague. Caused by airborne microbes in the atmosphere of 58 Eridani II ('Ngano', a jungle world in the 58 Eridani star system, in the Chinese Consortium colonised arm), the Ngano Plague is a highly contagious viral disease that causes vivid hallucinations and acute paranoid delusions in those exposed. Infected victims are dubbed 'Crazies' due to the insane psychopathic state induced during the plague's later stages.

The plague quickly cripples the colony (it has an incubation period of over 4 weeks) and carriers soon infect the colonies in neighbouring systems. Ships with infected personnel arriving at star systems further afield are intercepted and quarantined. Approximately half a million colonists fall victim to the Ngano Plague before it's spread is checked by the ICA and ITC.

In the wake of the plague, new laws are brought into effect, making it illegal for any interstellar vessel to enter the Core Systems without first passing through ITC quarantine. It also becomes standard policy for any ITC licensed starship to have an Android Exo on board.

2254: Hallidor Corp acquires EnerTek Corp

Hallidor Corp acquires EnerTek Corps colonial assets. As Hallidor and the ICA move in to take control of the Herculis colonies, the action sparks a wave of civil unrest. A grassroots independence movement has been growing in the Herculis Cluster ever since the colonies were allowed a degree of regional autonomy by the ICA during the chaotic years following the EnerTek collapse.

2255: New Ganymede Insurrection

Colonists led by a former Marine rebel against Weyland-Yutani's exploitative policies and harsh labor conditions. The insurrection is quashed after a siege by Weyland-Yutani and UEAF forces. The incident results in severe reprisals and tighter corporate control.

2255: Arcturus Station Siege

Arcturus Station is a major trading hub. Colonists revolt against the UA government due to high taxes and corruption, seizing control of the station's main facilities. The UEAF enforces a blockade and assault, leading to a prolonged siege. The rebellion is eventually defeated, but the incident exposes deep-seated colonial grievances.

2256: Colonies in the Herculis petition for regional autonomy

Eli Navarro, a colonial administrator from the fledgling Nuevo Santiago colony in the 18 Scorpii star system leads a delegation of representatives from colonies in the Herculis Cluster to petition the UEF General Assembly for continued regional autonomy. The controlling political party in the General Assembly – the Centralist/Neo-Federalist Alliance is staunchly anti-separatist and rejects the petition.

2256: Helene 215 Campaign (82 Eridani II)

Helene 215 is orbiting 82 Eridani, approximately 20 light years from Earth. The Shinowa and Tokonigara colonies rebel against the UEF authority, leading to a prolonged and brutal campaign by the Interstellar Colonial Marine Corps. After intense military operations, the ICM successfully neutralizes the rebellion, restoring order. This campaign highlights the harsh methods used to maintain control over distant colonies.



2257: Colonial Sedition

Civil unrest in the Herculis Cluster grows, and on the larger colonies the protests turn into riots as separatist-supporting colonists clash with ColSec troops. Separatists led by Eli Navarro take control of the ICA office on Nuevo Santiago, declaring independence from Earth rule. Other colonies in the Herculis Cluster quickly follow suit, rallying to Navarro's

cause. Large numbers of the ColSec and corporate garrisons, many with families and some born and raised on worlds light years from Earth, defect to join the separatists.

The UEF Security Council meets in emergency session. Resolution 11702 is passed, and the UEAF begins massing forces at 70 Ophiuchi, taking control of the orbital drydocks. The first target is Aricebo in the 82 Eridani star system. Colonial Marines quickly take control of the starport and neutralise the separatists on the world. Resentment of the military occupation among the population remains high and the ICM are drawn into a prolonged and dirty guerrilla war.

2258: The Rimworlds Rebellion

NatSoc, a political movement in the Outer Rim Territories stages a series of swift and bloody coups against local ICA installations. On Pei Pei colony in the Alpha Mensae star system, rebel fighters raid the ICA complex, capturing many hostages. Armed NatSoc-loyal militias, joined by defecting ColSec forces, quickly overpower the local garrisons. The colonies declare themselves the Eurasian Rimworlds Combine (ERC). The leaders of the ERC demand recognition and total independence. At the age of 50, Sclar Visari is named first Autarch of the Eurasian Rimworlds Combine.



A raid by the ICM, on Pei Pei colony, succeeds in rescuing the majority of the ICA hostages held by the rebels. At the same time, a state of emergency in the Outer Rim Territories is declared by the UEF. The ICM, backed by the newly formed United Earth Federation Expeditionary Force (UEFEF) is ordered to stop the insurrection. Martial law is imposed in the Outer Rim Territories and Herculis Cluster.

2258: The Colonial Wars

The Colonial Wars are fought primarily on two fronts: the Herculis Front lies Coreward of Sol and comprises the star systems that would become the Free Worlds Alliance (FWA); the Rimworlds Front lies Rimward of Sol and comprises those star systems that would become the Eurasian Rimworlds Combine (ERC).

The war rages for three years, during which time the UEF wage economic and military warfare against the rebels, and sees fighting on a score of worlds in over a dozen star systems. Some colonies capitulate quickly and with little loss of life. Others turn into protracted and bloody campaigns claiming thousands of lives, such as Vega, Delta Eridani and the disastrous Ixion invasion.



2258: Tientsin Campaign (8 Eta Boötis A III)

Tientsin, the third planet orbiting the star 8 Eta Boötis A, is located approximately 37 light-years from Earth.

Tientsin is a terraforming colony established by the United Earth Federation (UEF) on a planet with a harsh environment. The colony's main settlement, also named Tientsin, serves as a hub for mining and resource extraction operations.

Early 2258: Growing dissatisfaction among the colonists over working conditions, environmental degradation, and perceived exploitation by the UEF and corporate entities reaches a boiling point. Protests and strikes erupt across Tientsin, disrupting mining operations and infrastructure development projects.

Mid-2258: The UEF, alarmed by the escalating unrest and fearing a potential loss of control over the colony, deploys ICM units to Tientsin to restore order and protect corporate interests. Meanwhile, the ERC covertly provides support to the rebel factions, further fueling the insurgency.

The campaign is marked by a series of skirmishes, ambushes, and hit-and-run attacks between UEF forces and rebel insurgents. Guerrilla tactics are employed by the rebels to harass and undermine the occupiers, making it difficult for the Marines to maintain control over the colony.

Despite their superior firepower and training, UEF forces struggle to quell the rebellion as the colonists, emboldened by ERC support, continue to resist occupation. Several attempts to pacify the colony through military force result in heavy casualties and limited strategic gains for the UEF.

As the conflict escalates, the ERC intervenes more overtly, supplying rebel forces with advanced weaponry and tactical support. The influx of ERC aid strengthens the rebel's resolve and prolongs the campaign.

Faced with mounting casualties and diminishing public support for the campaign, the UEF eventually decides to withdraw its forces from Tientsin. The withdrawal of UEF forces is hailed as a victory by the rebel factions and their ERC backers, who declare Tientsin an independent colony free from Earth's influence.

2258: Linna 349 Campaign

Tensions between UEAF and FWA forces on Linna 349 escalate when the FWA faction acquires sophisticated weapons, including ASAT missiles, from an unidentified source. This escalation leads to a series of skirmishes and confrontations between the two factions.

The FWA faction's acquisition of advanced weaponry, suspected to originate from Wolf Wiesner Krupp, significantly shifts the balance of power on Linna 349. The introduction of ASAT missiles allows the rebels to pose a formidable threat to UEAF forces, leading to increased hostilities.

In a bold move, the FWA faction utilizes ASAT missiles to launch an orbital strike on the UEAF frigate USS Sulaco, crippling the vessel and inflicting heavy casualties. The attack marks a significant escalation in the conflict and underscores the effectiveness of the rebels' newly acquired weaponry.

Shocked by the devastating strike on the USS Sulaco, the UEAF responds by deploying a significant military force to retake control of Linna 349. The battle is marked by intense ground combat, aerial engagements, and urban warfare as UEAF troops engage the entrenched rebels.

After a fierce and protracted battle, UEAF forces succeed in defeating the FWA insurgents and retaking control of Linna 349. The campaign ends with the UEAF firmly establishing its authority over the colony and suppressing any remaining pockets of resistance.

The conflict on Linna 349 further strains relations between the UEAF and the FWA, exacerbating existing tensions and contributing to the broader geopolitical landscape in the frontier colonies.

2258-2259: Persei Campaign

The Persei system has long been a contested region between the UEAF and the ERC due to its valuable resources and strategic importance. Both factions have established colonies and mining operations across the system, leading to frequent clashes over territorial disputes and control of key assets.

Late 2258: Skirmishes and border incidents between UEAF and ERC forces increase in frequency and intensity across the Persei system. Both factions accuse each other of encroaching on their territory and exploiting local resources.

December 2258: A ERC patrol discovers evidence of a secret UEAF research facility on Persei-5, suspected of conducting illegal bioweapons experiments. The discovery sparks outrage among ERC leadership and prompts calls for a military response.

Early 2259: The UEAF responds to the escalating tensions by deploying additional ICM units to reinforce its presence in the Persei system. The ERC, viewing the UEAF's actions as aggressive, mobilizes its own military assets and prepares for a confrontation.

Battle of Persei-5: The conflict escalates into a full-scale battle when ERC forces launch a surprise assault on the UEAF research facility on Persei-5. The facility, heavily defended by UEAF Marines and corporate security, becomes the focal point of the fighting.

Siege of Persei-7: UEAF forces retaliate by besieging a major ERC mining colony on Persei-7, cutting off supply lines and launching periodic artillery bombardments. The siege leads to a protracted stalemate, with both sides suffering heavy casualties.

Battle of Persei Prime: The campaign culminates in a climactic battle for control of Persei Prime, the system's largest inhabited planet and a key strategic asset. UEAF and ERC forces engage in fierce ground battles, orbital skirmishes, and sabotage operations in a bid to gain the upper hand.

In a desperate bid to break the deadlock, both factions launch simultaneous offensives against each other's positions on Persei Prime. The resulting battles are marked by heavy casualties and widespread destruction, leaving much of the planet's infrastructure in ruins.

The Persei Campaign officially comes to an end with a ceasefire brokered by neutral parties. Both the UEAF and ERC agree to withdraw their forces from contested territories and establish demilitarized zones to prevent further hostilities.

2258-2259: Vega Campaign

Late 2258: Weyland-Yutani, having established extensive mining operations on Vega VII, faces growing discontent among the workforce due to harsh working conditions and exploitative practices. The corporation's heavy-handed response further exacerbates tensions.

December 2258: The situation escalates when a faction of miners, secretly supported by the Free Worlds Alliance (FWA), seizes control of several mining outposts and declares their independence from Weyland-Yutani and the United Americas (UA).

January 2259: The UEAF responds by dispatching a battalion of Interstellar Colonial Marines to Vega VII to suppress the rebellion and restore corporate control. Simultaneously, the FWA sends covert operatives and supplies to aid the rebels, viewing the uprising as an opportunity to undermine UEAF influence.

February 2259: The conflict intensifies as the ICM establish a base of operations and begin coordinated assaults on rebel-held outposts.

Battle of Vega Mines: One of the first major confrontations occurs at the Vega Mines, a key resource extraction site. The Marines launch a series of frontal assaults to reclaim the mines, facing fierce resistance from well-armed rebel forces. The battle is characterized by brutal close-quarters combat in the mine shafts and tunnels.

Siege of Weyland-Yutani Research Facility: Rebels target the Weyland-Yutani research facility, hoping to leverage its advanced technology and supplies. The facility, heavily fortified and defended by corporate security, becomes the site of a prolonged siege. The Marines are called in to break the siege, leading to a high-casualty operation that eventually lifts the blockade.

Battle of Vega Central: The campaign reaches its climax with the Battle of Vega Central, the main colony hub. Both sides bring in reinforcements, resulting in a massive and chaotic urban battle. The engagement involves heavy artillery, aerial support, and street-to-street fighting.

Final Offensive: In a decisive move, the ICM launch a coordinated offensive aimed at dismantling the rebel command structure and reclaiming key infrastructure. The offensive succeeds, forcing the rebels to retreat and scattering their remaining forces.

April 2259: The UEAF declares victory in the Vega Campaign, having restored control over the moon. Weyland-Yutani resumes its operations under stricter UEAF oversight to prevent future uprisings.

2258-2259: Ixion Campaign

The Ixion system had long been a point of contention between the UEAF and the ERC, with both factions vying for control over its valuable resources. Tensions escalated when the UEAF established a series of military outposts and research facilities in the system, viewed by the ERC as an encroachment on their territory.

Late 2258: Skirmishes and border clashes between UEAF and ERC forces escalate into open conflict across the Ixion system. Both factions accuse each other of violating territorial boundaries and engaging in covert operations.

Early 2259: The UEAF launches a preemptive strike against a suspected ERC supply depot on Ixion-3, triggering a full-scale military response from the ERC.

Mid-2259: Both the UEAF and the ERC deploy significant military assets to the Ixion system, including fleets of warships, ground forces, and orbital support. The region becomes a hotbed of military activity, with numerous engagements occurring across multiple fronts.

Battle of Ixion-5: The conflict intensifies when UEAF forces attempt to seize control of the strategic mining facilities on Ixion-5, a resource-rich planet. The ensuing battle involves fierce ground combat, aerial dogfights, and orbital bombardments, resulting in heavy casualties on both sides.

Siege of Ixion-Prime: ERC forces retaliate by laying siege to Ixion-Prime, the largest inhabited planet in the system and a key UEAF stronghold. The siege lasts for several months, with UEAF defenders struggling to repel the ERC assault amidst dwindling supplies and constant bombardment.

Late 2259: The campaign culminates in a climactic assault on Ixion-Prime by ERC forces, determined to dislodge the UEAF from their last remaining stronghold in the system. The battle is marked by desperate last stands, close-quarters combat, and brutal street fighting.

2259: Delta Eridani Campaign

Early 2259: The mining colonies on Delta Eridani III and Delta Eridani IV begin experiencing increasing unrest. Workers, frustrated by dangerous working conditions, low pay, and neglect, start organizing protests and strikes.

March 2259: Tensions escalate as Weyland-Yutani security forces respond with force, resulting in violent clashes. The situation deteriorates into a full-scale rebellion as the colonists take up arms.

April 2259: The UEAF dispatches the Interstellar Colonial Marine Corps (ICMC) to restore order and protect corporate interests. Simultaneously, the FWA sends a task force to support the colonists, viewing the rebellion as a struggle against oppression.

May 2259: Both UEAF and FWA forces establish bases on different moons of the Delta Eridani system, leading to a tense standoff.

Battle of Eridani Ridge: One of the first major confrontations occurs at Eridani Ridge, a strategic location controlling access to several mining sites. The battle involves intense infantry combat and armored skirmishes. UEAF forces manage to secure the ridge, but suffer heavy casualties.

Siege of Delta Outpost 47: FWA forces besiege Delta Outpost 47, a key Weyland-Yutani research facility. The siege lasts several weeks, with both sides experiencing significant losses. The FWA eventually breaches the facility, discovering disturbing evidence of bioweapons research.

Battle of Delta Prime: The campaign culminates in a massive engagement at Delta Prime, the largest colony in the system. The battle sees the deployment of advanced weaponry, including orbital strikes and heavy artillery. Urban warfare ravages the colony, with significant civilian casualties.

Final Offensive: In a final push to end the rebellion, the UEAF launches a coordinated offensive to crush the remaining rebel forces and secure key installations. The FWA, facing overwhelming firepower, retreats but vows to continue supporting the colonists' cause through other means.

August 2259: The UEAF declares victory and re-establishes control over the Delta Eridani system. Efforts to rebuild the devastated colonies begin, but the scars of the conflict remain. Many colonists harbor deep resentment towards Weyland-Yutani and the UEF, fueling ongoing resistance and underground movements.

2260: Epsilon Ceti IV and Betelgeuse Campaign

The campaigns in Epsilon Ceti IV and the Betelgeuse system are characterized by their mysterious and clandestine nature. Little information is available to the public, with details about the missions and their outcomes closely guarded by military authorities and government agencies.

In 2260, the UEAF assembles four companies of ICM into two fleets and deploys them on classified long-distance missions to systems far beyond the 20 Parsec Limit. The objectives and targets of these missions are known only to a select few within the military hierarchy and government leadership.

Most combatants involved in the campaigns undergo medpod procedures that erase their memories of the conflicts. The rationale behind this memory erasure is allegedly to protect the soldiers from psychological trauma associated with the events they experienced.

Information about the battles, engagements, and outcomes of the campaigns is tightly controlled and classified. Court-martials, psychological discharges, suicides, and unexplained deaths among participants further contribute to the veil of secrecy surrounding the missions.

Given the secrecy surrounding these campaigns and the lack of specific information about their outcomes, it's unclear which side, if any, emerges as the victor. Survivors of the campaigns either undergo promotion or are reassigned to remote outposts on long-term contracts. The psychological toll of the missions, combined with the memory erasure procedures, leaves many participants grappling with the trauma and uncertainty of their experiences.

2260: The Ceasefire

Casualties continue to mount, as public support for the war continues to fall. Anti-war protests on Mars turn violent, and the Mars garrison has to be mobilised to quell the riots.

When a ERC suicide mission succeeds in penetrating defences at Omicron² Eridani and cripples a UEAF taskforce orbiting Eridanus with great loss of life, voices inside the General Assembly begin to call for a negotiated ceasefire with both groups of rebels. On 1st May 2260, thanks in part to the negotiating skills of the Chrislamic Church, an uneasy ceasefire is established with both of the remaining pockets of rebellion. No peace treaty is signed with either group.

Blockaded by the UEF, the separatist colonies in the Herculis Cluster declare themselves the Free Worlds Alliance. As promised, Eli Navarro devolves government to individual colony worlds, with all colonies agreeing to help maintain an FWA militia.

A 1 parsec DMZ is established between ERC and UEF space.



2261: The Relaunch of ORION

The UEAF reactivated the ORION Project. The project was named after the Orion Arm of the Milky Way galaxy. The aim of the ORION project was to increase the effectiveness of the Colonial Military Authority's soldiers in charge of colonial security.

2262: UEF Elections

Social and political fallout from the Colonial Wars is cited as the main factor in the defeat of the centre-right Centralist-Neo Federalist Alliance in UEF elections. A centre-left coalition takes control of the General Assembly.

2264: The Capellan Mandate

Documents are leaked to the press revealing that during the Colonial Wars the UEF government covertly hired Capellan pirates to harass ERC shipping. The scandal reverberates through the UEF corridors of power. A commission is set up to investigate the matter and bring those responsible to justice.

2265: The SPARTAN-II Project

Though the Orion super-soldiers were effective; their abilities fell short of the scientists' hopes, and they cost far too much to develop and field. The new goal of Spartan-II was to learn from the mistakes of the previous attempt and, using advancements in bio-engineering technology, create a genetically enhanced and mechanically augmented super-soldier – and to deploy these soldiers behind enemy lines where they would quell insurgencies in their infancy, or neutralize established insurgencies by destroying their chain of command.



2268: Skirmish at Sigma Draconis

Sigma Draconis is a disputed system between UEF and ERC territories. Both claim to the system's resources, leading to a series of skirmishes. The conflict is fueled by strategic and economic interests, with both sides deploying significant military assets. The skirmishes remain unresolved, leading to a tense standoff and a temporary ceasefire. Diplomatic efforts continue, but the region remains a flashpoint for future conflicts.

2271: NOW

The End Times

By the end of the 23rd Century, the End times are still upon humanity. Something is going to happen, but there is a chance that humanity will survive in some fashion, somewhere out there among the stars...

4.5 billion BC	As the Earth begins to cool down from its own creation, a Great Old One named Cthugha arrives on Earth with his legion of Fire Vampires.
1 billion BC	A race of aliens known as the Elder Things arrive on Earth in the Antarctic region and create a city within the ice.
541 million BC	On Earth, the Elder Things fight against the Spawn of Cthulhu.
250 million BC	The Great Race of Yith inhabits Earth and wars against the Flying Polyps. Meanwhile, the Elder Things are still active on the planet, now fighting against the Mi-Go as well as dealing with the first Shoggoth rebellions.
100 million BC	The Thing crash lands on Earth in the Arctic where it became frozen in ice for millions of years.
10 million BC	The Forerunner – Precursor war happens rendering the Precursors almost extinct and The Forerunners take the mantle of responsibility by force.
250,000 BC	A meteorite falls in Alaska containing Parasitic Ice Worms which would remain dormant until being accidentally released in 1993.
110,000 BC	The Human-Forerunner war. Ending in the defeat of the ancient humans and the Forerunners taking the Mantle of responsibility.
100,300 BC	A Forerunners space-faring scientists, make first contact with a parasitic organism known as the Flood. The Flood-Forerunner war begins.
57,448 BC	A meteor bearing Forerunner symbols crashes on the planet that will be known as Sigma Octanus IV. The meteor will be discovered approximately 60,000 years later, with its contents later reclassified as an important artifact to the Covenant.

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35,000 BC	Two cavemen in North Texas, Earth are attacked by a long-clawed alien. One of the men is killed while the other becomes infected with the Purity.
10,000 BC	A meteorite falls to Earth, containing genetic material that would later be used in the creation of an alien predator.
2996 BC	The Predators arrive on Earth, teach humans to build pyramids, and are worshiped as gods. An ancient civilization located in a huge cavern beneath the volcanic Bouvet Island grows to the height of its power.
2200 BC	Queen Nitocris, the Ghoul-Queen, rises to power in Sixth Dynasty Egypt. She revives the worship of Nyarlathotep once more, and uncovers the Shining Trapezohedron. She engages in many unspeakable acts during her reign, weakening her nation sufficiently to usher in the First Intermediate Period of Egyptian history. She leaves behind an artifact known as the Mirror of Nitocris.
126	A force of legionnaires travels north of Hadrian's Wall into Pictish territory on a mysterious mission. Their fate is never uncovered.
534	Meteor impact in Britain (modern Brichester Lake) brings Gla'aki to Earth.
640	The Great Library at Alexandria is burned. Certain texts escape the Library's destruction, and eventually make their way to the monastery of Perigon in Averogne.
738	Abdul Alhazred dies. According to popular lore, he is killed in the marketplace of Damascus by an invisible monster.
1000	A "strange and powerful dynastic order" builds a stone priory atop an ancient temple in modern-day Anchester, the site of which eventually becomes Exham Priory.
1200	The local clergy in Avebury begins efforts to remove certain local standing stones, efforts that continue into the 14th century; many of the stones are destroyed.
1307	The Knights Templar in England are disbanded by King Edward II.
1400	A man described as a "ghoul" is buried in a Holland graveyard, along with a jade amulet of the "corpse-eating cult" of the Plateau of Leng.
1519	Leonardo da Vinci dies, and his library is scattered. Among the lost books is his copy of the Latin Necronomicon.
1573	A sect of Yog-Sothoth worshippers is founded in the mountains of Romania. Their leader is a man named Chorazos, and they are thus called the Chorazos Cult.
1600	A meteor containing an alien city crashes into the Severn Valley. The being known as Gla'aki lives within. The meteor crater slowly fills with water, eventually becoming a lake.
1639	Settlers from southern England and the Channel Islands found Kingsport on the coast of Massachusetts, south of modern-day Arkham. A cult arises in Kingsport, with meetings held in the town's Congregational Church.
1643	The town of Innsmouth is founded in Massachusetts.
1692	March: A witch hysteria engulfs Salem, Massachusetts. Many innocent citizens are accused of witchcraft and executed. An ancestor of Richard Upton Pickman is among those that are hung. The danger drives Joseph Curwen to move to Providence, Rhode Island. Others, a group of Believers (including the Whateley and Bishop families), move to north-central Massachusetts. There, they found the town of New Dunnich. Edmund Carter, ancestor of Randolph Carter, is nearly hung in Salem and flees to the hills behind Arkham. Soon after the witch panic begins in Salem, it spreads to Arkham. As a result, they send one witch, Keziah Mason, to Salem for trial. However, Mason disappears from her cell before she can be executed. The witch panic also spreads to Kingsport, which results in the hanging of thirteen reputed witches.
1718	A band of pirates are hunted by a Yautja, who eventually takes a gun crafted in 1715 with the word "Roanoke" engraved in it.
1722	A raid is made on Kingsport's Congregational Church, to disperse a pagan cult holding ceremonies beneath it. Thirty of the pagans are captured. The raid is led by Mayor Eben Hall
1844	Professor Enoch Bowen ceases his excavations of Nephren-Ka's tomb upon finding the Shining Trapezohedron, and returns to Providence. Once there, he founds the Church of Starry Wisdom.
1878	Obed Marsh dies. His family continues to run the Esoteric Order of Dagon in his stead, and retain

control of Innsmouth.

1882	A strange meteor lands near Arkham, on the property of a farmer named Nahum Gardner. Henry Armitage later investigates, leading to his interest in acquiring the Necronomicon for the Miskatonic University library and studying it.
1896	London, England: A Predator hunts in London, giving rise to the legend of the murderer Spring-Heeled Jack. It is faced again by Captain Edward Soames, who is employed by the secret order of the mysterious Diogenes Club, lead by Mycroft Holmes. Soames defeats the beast, its body sinking to the bottom of a mud pit. Holmes orders its ship, which was hidden in the sewers of London, to be sunk into the sea.
1904, October 10	Bouvetoya, Antarctica: Aliens and Predators wipe out the inhabitants of a whaling camp on Bouvetoya in the South Atlantic Ocean. One whaler, Karl Johanssen witnessed a Predator fighting an Alien before dying of hypothermia.
1914, August	France: World War I. The Predators are attracted to the massacres and battles in the war. Cloaked Predators are shown active at at least two locations.
1915	A supercargo captured by Germans in the Pacific escapes in a raft. He soon finds himself on a recently uprisen island, where he has a terrifying encounter. After returning to civilization, the former supercargo makes inquiries into the nature of the Philistine god Dagon. After this, he disappears.
1916, June 18	Verdun, France: Jean Brunaud and his squad witness a Predator in battle at the trenches near Verdun. He tries to tell his superiors but goes unheeded, despite Predators being witnessed killing German and French troops. He keeps a helmet of one of the fallen Predators. It is eventually passed down by mysterious people to CIA lawyer Griggs Irving in 1992.
1921	A visitor to Kingsport walks off the cliffs at Orange Point, then is rescued, while raving about being from the past and taking part in a hideous subterranean ceremony. He is confined to Arkham Sanitarium.
1925	R'lyeh rises from the ocean. In short order, many cases of madness erupt worldwide.
1926	Florida Everglades: A predator hunts an escaped convict from the Big Cypress Penitentiary and the three prison guards sent after him. Only the lead guard survives, keeping his story a secret.
1928	The U.S. government raids the town of Innsmouth, attacking Devil Reef, and bombing the underwater city of Y'ha-nthlei. They also capture many deep one half-breeds, taking a number of them to a camp in Oklahoma. During the raid, Asaph Waite, author of the Invocations to Dagon, is killed. Most of the Marsh family escapes to Ponape, though a few remain behind or go elsewhere. As a result of this raid, the government becomes aware of the existence of Mythos activity. They continue to occupy and block off access to Innsmouth through the next year, destroying more buildings and taking numerous town records. Miskatonic University acquires numerous books from the Esoteric Order of Dagon's library, including a copy of the Codex Dagonensis.
1930 September 2	The Miskatonic University Expedition departs for a geological and biological study of Antarctica, led by geologist William Dyer. The expedition lands in November and explores the Antarctic for two months. Disaster strikes when its researchers uncover long-dormant Elder Things, and then an Elder Thing city and a monstrous shoggoth.
1939-1945	Llanganati Mountains, Ecuador, South America: During World War II, a Nazi commandant and his team encounter a Predator during their quest for Incan gold. They destroy a village and use a child as their guide. He is the only survivor who keeps his story a secret.
1947 June 24	Thunderstorms apparently cause an unidentified flying object to crash near Roswell, New Mexico. A 150-man team from the Central Intelligence Group recovers the wreckage and four humanoid creatures, three killed in the crash and one unconscious.
1947 September	To consolidate xenobiological research, the single surviving extraterrestrial occupant found at the Roswell crash is transferred to a purpose-built facility at Los Alamos.
1964	Despite the efforts of the Wilmarth Foundation, the cthonians invade the Americas. This leads to an intense campaign against the cthonians in America and Great Britain that continues through 1969.
1968	Vietnam: A Predator hunts during the Vietnam war and the South Vietnamese officer from the famous footage of the execution of a North Vietnamese prisoner is later accused of committing a bloody massacre which was actually a Predator attack.
1980	The Wilmarth Foundation initiates Project Cthylla. A nuclear bomb is sent burrowing beneath Devil's Reef, where it is intended to destroy Cthylla. After it is detonated, a hateful psychic assault is sent from R'lyeh. Over the next three days, many are driven insane, the Miskatonic Valley is decimated by

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	natural disasters, Miskatonic University itself is destroyed, and Wilmarth Foundation director Wingate Peaslee is killed. The University is rebuilt, but Cthylla survives, and the anti-Mythos organizations must look on their foes with new humility.
1984	Nicaragua: A Predator attacks and decimates a Contra-training camp headed by US Special Forces Officer Faulkner. Only Faulkner survives the incident.
1987	Val Verde, Central America: In the jungles of South America, a group of hardened Special Forces commandos are on a routine rescue mission when they find themselves being hunted by an alien predator. The group is slowly whittled away a Predator, but eventually defeated by the sole surviving member of the commandos, Major Dutch Schaefer.
Summer 1989	New York City, NY: A Predator fights Dutch Schaefer's brother Detective Schaefer, his partner, Detective Rasche, and street gangs. Shaefer fights another Predator in Val Verde. Shaefer, Rasche, the gangs, the police and the army then face a fleet of Predators in New York City. The military officer in charge of the operations dealing with the Predators is Major General Philips from the Val Verde incident.
1990	Yamal Peninsula, Siberia, Russia: About 5 months after the events in New York, a Predator ship crashes near an oil station in Siberia and attacks the refinery. An undercover US team is sent in by Major General Philips, who recruits Detective Shaefer to join them, in order to capture the Predator's technology. A Russian team is also sent to do the same. Shaefer teams up with the lead Russian officer who survived the initial attack to fight the Predators and destroy their ship.
Summer 1997	Los Angeles, CA: A Predator lands in Los Angeles and begins hunting gang members and policemen involved in a drug war, but is defeated by Lieutenant Michael Harrigan. The Predators are hunted by a clandestine government military team known as the OWLF unit is lead by Special Agent Peter Keyes, they have detailed information about the Predators and records of the Val Verde incident. The Predator's body is reclaimed. Harrigan is given the gift Raphael Adolini's flintlock pistol by an Elder Predator, presumably the Golden Angel Adolini fought with. Keyes is followed by Agent Garber as head of the OWLF unit.
2004, October 03, sunday	Bouvet Island, Antarctica: A Predator ship nears Earth, initiating a heat bloom beneath Bouvet Island near Antarctica which is detected by satellites belonging to Weyland Industries. Specifically, Weyland Industries satellite P12 picks up a heat bloom over Antarctica and the icebreaker Piper Maru is dispatched to investigate. Max Stafford starts combing the globe looking for various experts for the expedition.
2004, October 10, Sunday	Bouvet Island, Antarctica: A Weyland Industries team led by company head Charles Bishop Weyland discovers a pyramid beneath Bouvet Island, where they are caught in a battle between the Predators and Aliens. Lex Woods is the only survivor. As the Predator ship departs, an Predalien erupts from the body of a dead Predator.
2004, October 14, Thursday	Gunnison, Colorado: A hybrid Predalien crashes aboard a Predator ship outside of Gunnison, Colorado. Several facehuggers and the hybrid creature escape, invading the town and creating more Aliens. A lone Predator arrives and fights the Aliens in a battle with the a group of local people caught in the middle. The United States government gets involved with the attempt to contain the situation in an extreme way. A recovered Predator shoulder cannon is delivered to a woman identified as "Ms. Yutani".
2017	OWLF (Other Worldly Life Forms Program) is renamed into Project Stargazer.
2018, October	A Yautja ship crash-lands on Earth. The Predator is captured and taken to a lab for experimentation. An Ultimate Predator arrives, kills the prisoner and destroys the crashed ship.
2025, January 07	Weyland manufactures the first advanced android prototype model of its kind. He is affectionately called David, a name Sir Peter Weyland had initially reserved for his own human son.
2029, December 12 th	After years of litigation, Weyland wins the David patent lawsuit against the Japanese start-up Yutani Corporation, effectively protecting the investments of both Weyland Industries and its shareholders.
2039, May 14 th	Weyland astronomers discover multiple moons and a ringed planet just outside the Zeta 2 Reticula System, which are possibly able to support life. Weyland expects to travel there within the century.
2040	Vanishing of the 'Event Horizon' spaceship during its maiden voyage to Proxima Centauri for an experimental engine that opened a rift in the space time continuum.
2047	The spaceship 'Event Horizon' mysteriously reappeared in a decaying orbit around Neptune. The rescue vessel Lewis and Clark is dispatched to look for survivors and determine what happened. Seventy-two days later, the forward section of the Event Horizon is boarded by a rescue party, who discover the remaining crew still in stasis.

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2061	Arkham Sanatorium burns down.
2083	Arkham Sanatorium rebuilt at a location close to the original.
2089	Dr. Elizabeth Shaw and Charlie Holloway discover a star map on Earth that points to LV-223.
2091	The Prometheus mission leaves Earth.
2093	The Prometheus reaches LV-223 and most of its crew is killed. Sir Peter Weyland is killed by an Engineer and the Prometheus is destroyed.
2094	David wipes out the Engineer population on the Paradise planet. Dr. Elizabeth Shaw is killed.
2103	The Covenant mission leaves Earth with the purpose of reaching the planet Origae-6 to colonize it.
2104	The Covenant mission receives a transmission from Dr. Elizabeth Shaw and lands on the Paradise planet to investigate.
2121	The Nostromo leaves Thadeus on a course to Earth with the crew of 7: Kane, Dallas, Lambert, Ripley, Ash, Parker and Brett.
2122	Nostromo lands on LV-426 to investigate a derelict transmission, they find a derelict ship where executive officer Kane is impregnated by a Xenomorph. Kane is brought onboard with the Xenomorph, crew wiped out in 24 hours, Nostromo destroyed, only survivor Ellen Ripley escapes in the Narcissus shuttle.
2128	The colonial transport vessel Moonchaser vanishes while enroute to Jupiter.
2139	Europa incident: a craft of strange organic design smashing its way out of Europa destroying the nearby mining colony of Gower 2, killing four citizens.
2150-ties	The Hadley's Hope colony is established on LV-426.
2179	The Narcissus with Ellen Ripley is picked up by a deep space salvage team.
2179, June 12 th	Carter Burke sends a transmission to Hadley's Hope to locate the Derelict.
2179, July	Contact with Hadley's Hope colony on LV-426 is lost.
2179, July	A ICM team lead by Lieutenant S. Gorman is sent to LV-426 to investigate contact breakoff with Hadley's Hope in the USS Sulaco. Ellen Ripley is sent with them as a consultant. The marines find only 1 survivor, Rebecca Jorden. Most of the marines wiped out by Xenomorphs or friendly fire, Atmosphere processor goes critical, the colony and surrounding area destroyed. The mission has 4 survivors: Ellen Ripley, Dwayne Hicks, Bishop 341-B android and Rebecca Jorden.
2179, August	The USS Sulaco jettisons the survivors of the LV-426 mission in an EEV as a fire is started on the ship by a Xenomorph. Ellen Ripley is impregnated. The EEV crashlands on Fury 161, a prison planet with 23 prisoners, 2 wardens and a medical officer. Dwayne Hicks and Rebecca Jorden are killed in the crash. A Xenomorph is brought along in the EEV, it infests a dog/ox, kills most of the prisoners, Warden Andrews and medical officer Clemens. Ripley consults heavily damaged Bishop and shuts him down. The Bishop II android with a team of special forces is sent to acquire Lieutenant Ripley on The USS Patna to get a hold of the alien queen specimen inside her. Ellen Ripley commits suicide, warden Aaron is killed. The only survivor is prisoner Morse. Fury 161 is closed down.
2183	Human Horizons Press offices burn down. Jonathan Monroe, author of a book the publishing house was about to publish, is arrested in connection with the fire. He later commits suicide while in police custody.
2194	The Anubis Incident. Nanotech accident at a research base in the Anubis crater on Ganymede. To this day the Anubis Quarantine Zone is a no-go area, and is patrolled by a marine contingent.
2199, March	Genetic Regulatory Agency investigation links bioroid trafficking to Martian Triad-controlled gas stations in the asteroid belt. SAD sends a squadron to the belt to suppress the activity.
2203	Professor Sutton and several other founding members of the Institute are killed in what is reported to be a freak boating accident off the island of Ponape.
2214	The Earth Children cult, an extreme offshoot of the Earth Isolationist Movement, grows in power. Eventually stories of kidnappings and holding members against their will pushes the Federal authorities to take action. A Waco style siege ensues. Federal troops storm the cult's heavily defended compound in Texas, but the cult's enigmatic leader, the Reverend Jebediah Stone, is nowhere to be found.
2222, April 26 th	The quantum malware Crawling Chaos infects out 90% of AIs from the Solar System and the colonies

and causes the Blackout. Out of the 10 billion inhabitants of the Earth, more than 60% are eradicated.

2242	Attempts to create a digital copy of the Necronomicon by EnerTek Corp's R&D division on Earth end in disaster when a computer virus is somehow introduced into the corporation's computer networks. EnerTek suffers critical data loss. Cultists of Nyarlathotep responsible. The disaster is the cause of EnerTek's eventual collapse.
2243	Destruction Of Spalding's Party.
2244	The Crawling Chaos computer virus crashes the Global Stock Exchange network, causing chaos among the business community. It is attributed to a group of computer hackers called the Exiles who were worshippers of Nyarlathotep.
2253	Innsmouth is quarantined by the FHS using the cover story of an outbreak of Ngano plague. Federal Law Enforcement officers, backed up by AmeriCorps soldiers raided the town. The raid resulted in the capture of approximately 200 Deep One hybrids. During the raid FLEA discovered five conical stone tablets inscribed with glyphs. The stone tablets are turned over to the Military Sciences Division cryptography unit.
2254	The captured hybrids are moved to a prison facility in south-eastern Arizona disguised as a military supply depot. Innsmouth is firebombed and remains sealed off by order of the Federal Government to this day. Some subjects are delivered to the R&D department of Zen Medical for research on gene therapy.
2255	MiliSci HQ on Mars is totally destroyed, when an explosion rips through the complex. Explosion caused by certain alien devices taken to the complex from an undisclosed site.
2258	Military Sciences Division transfer the bulk of their activities to a top secret location, a space station code named 'Pandora'.
2260	A Cenargo Corp. funded survey team on Mars discovers alien ruins at the bottom of the Coprates Chasma. MiliSci takes over the excavations. The find is classified as Top Secret. The area is sealed off to the public and the site is placed under heavy guard. Unknown to MiliSci, Cenargo has already taken certain items, including extensive photographic evidence of a set of stone tablet fragments inscribed with alien writings.
2261	An ERC recon team uncovered pre-human constructions on a satellite in the DMZ of the Border. By order of Jorhan Stahl, all findings are brought under the command of SP-8. The abandoned city's location is designated Point 103.
2262	A Colour Out Of Space attacks Mayfield, a colony in the Outer Colonies. It is eventually contained using a magnetic field generator, taken from an unused fusion reactor. MiliSci organise a cover-up. Point 103 gradually grows to house 22 archaeologists, cryptographers, and experts in ancient languages. Having discovered an arcane formula for the "resuscitating of ye vital saylts," a section of SP-8 uses the formula to revive the corpse of Kim Chung Song. Jorhan Stahl immediately orders the creation of SP-Koldovstvo to research and exploit the occult for military purposes.
2263	Professor Kitover, a MiliSci scientist, translates the Coprates Fragments and promptly goes insane and destroys his lab, including the Fragments.
2264	The Hansen's Disease Research Facility was a medical center situated inside the canyon of Valles Marineris, on Mars. The facility was used by Zen Medical as a cover for the experimental therapy. The patients were homeless and insane individuals on whom gene therapy was performed using Deep One DNA. These experiments had terrible results and left the patients with a half-alien, half-human appearance. This failure at producing healthy hybrid specimens led the Corporation to have the patients shot by MiliSci and piled up in a mass grave.
2265	SP-K perfect a method for reviving the dead. A labor force of concentration camp prisoners is transported to Point 103 for experiments.
2266	A shuttle of "resuscitated casualties" are driven from Point 103 to the Border and are released on an UEAF outpost. SP-K considers the results very satisfactory. MiliSci is immediately alerted.
2267	Contact with Robinson, a colony in the Outer Rim Territories is lost. ICM S&R team dispatched. Upon arriving they discover the colony base burnt to ashes, with only one survivor, raving about how 'the stars swarmed on us and killed everyone'. MiliSci organise a cover-up. The Point 103 team unearths an unimaginable weapon used by the pre-human civilization to reshape the face of a planet. The satellite is obliterated during an abortive and poorly understood attempt to summon dread Azathoth, the Daemon Sultan.

- 2268 The Tyrant (T-002 Type), an improved variants of the Progenitor virus, was completed. However, an accident occurred during injection of the virus into the host, causing an airborne leak of the strain within the Laboratory that infected the researchers. Cenargo sealed their site in Acheron Fossae on Mars.
- 2270 A suborbital transit station between Midgard City and the Asgard Industrial Park, Transit Station 13 was closed down after a flash fire destroyed it and a docked personnel transport, killing 126 people. Conspiracy theories and dark rumours have dogged this disaster. Some claim that the passengers' bodies were not burnt but badly mutilated, and that no traces of fire were found by the initial rescue team. Rumours also claim that MiliSci arrived on the scene and closed off the station. All of which is denied by the authorities. Though it is an odd fact that all of the ten man fire team that first arrived on the scene that day have either left the colony, vanished or died.



Life in the 23rd Century

by John Ossoway & Thorin Tabor

"There's nothing left down here. They have it all on Elysium, food, water, medicine, and they'll do anything to keep us out. It's time to change everything."

Max Da Costa – former criminal on probation

Life goes on. It evolves. In the early 23rd century it is still changing. People in New Horizon still form families, still need education for many jobs and many still attend religious services. Other things have changed, though, such as where people look to form relationships, the methods used in education and many of the allegiances of everyday life.

Relationships

Human society would not exist without relationships, and in the twenty-third century it is no different.

Family is still an important component of most anyone's life, even if family members are spread out throughout the system. Most people inherit their subculture from their parents. Corp and nation-state citizenship is often transferred automatically from parent to child. Family wealth also largely determines access to education and the most profitable jobs.

The institution of marriage is also still alive and well, even if it has evolved substantially. Marriages typically last an average of 8 years, and few people expect to be married for life. Same-sex marriage is accepted in all but a few groups, and in most places group marriage – marriage between three or more consenting adults – are also commonly accepted.

These newer permutations of marriages are particularly relevant when children come into the picture. Advances in biotech mean viable children can be produced from parents of the same sex or even from the DNA of more than two individual parents. This comes with a sometimes hefty price tag, though, and as a consequence, it is significantly more common among the well-to-do. The average number of children is slightly over two, and the population keeps creeping upwards, with Earth now home to over 10 billion human beings.

The rise of reliable telepresence technologies has resulted in extended families spreading out more than they used to. People tend to go where their patron corp sends them, and the idea of living one's adult life in the same town or neighborhood where one grew up is seen as something of a charming thing of the past.

Identity

All citizens of the United Earth Federation have their DNA fingerprint recorded at birth and added to the Federal Public Records Database, allowing police to identify any suspect within a matter of hours. In addition, citizens of the Federation are required by law to carry an ID card at all times, which contains biometric information.

Money

Though most nations still retain their own currencies for domestic use, virtually all international trade is conducted using the Euro-Dollar as the base, an amalgam of the two strongest 21st Century currencies before the collapse of the global economy in 2084. Most of the daily transactions made by Federal citizens are electronic. Scanners in retail outlets match an individual's retina against the biometric information on their bank smart-card to verify identity. Money is debited from the citizens' bank account when goods are purchased.

Because of the delay in communications over interstellar distances, many banks provide a facility where credit can be downloaded to a smart card before a journey.

Hard currency still exists, but it is rare in the Core Systems, being much more common in the Outer Colonies and beyond. Hard currency is still the preferred payment method by those individuals who do not want their spending habits recorded.

Currency is printed in Eurodollars, though some corporations print their own currency, which is legal tender only on colonies that they control.

Food

In the 23rd Century, genetically modified food is commonplace, and by far the most common genetically modified organisms are crop plants. Megacorporations engineer crops to produce traits such as disease resistance and drought tolerance, or the ability to grow on planets orbiting stars of a different spectral type. Bringing in and altering genes from other species is the only way to improve these crops, thus enabling the crops to be grown on marginal colony worlds.

Animals are no longer reared for their meat. Instead, 'cultured meat' is grown from cells removed from farm animals and proliferated in a nutrient-rich medium. Using this technique, single cells can be used to produce enough meat to feed a global population for a year. The resulting meat product can then be harvested, seasoned, cooked, and consumed as a boneless, processed meat.

Property

On 23rd Century Earth, there is a premium on real estate, with the government and corporations owning most available property. Renting is the norm, with owning one's own house reserved for the rich and famous.

In space this basic income tends to be even less liquid, often being paid out as vouchers for air, basic food and water. Amongst all these economic happenings, the practice of indenture has wormed its way back into common use. This ties individuals to a particular employer and is often used as a punishment for defaulting on debts or as a means to pay of loans.

Healthcare

By the latter half of the 23rd Century, medicine has advanced in all fields to levels unparalleled. Infant mortality rates on Alpha Status worlds is the lowest ever recorded, and life expectancy has increased to the point where it is now the accepted norm for people to live well into their 90s. Though the Eckerley ruling of 2086 prohibits the cloning of an entire human body, cloning technologies now enable hospitals to grow new organs and limbs for patients needing transplant surgery, thus forever eliminating the spectre of organ rejection. Micro-surgery has reached a point where the rebuilding and/or attachment of severed/cloned limbs has a success rate of over 96.4%. Although gene therapies have all but eliminated many hereditary disorders and genetically-enhanced designer pharmaceutical products have defeated many diseases, more still exist. Some of these are new to humanity, being unintentionally imported from alien biospheres. Some forms of cancer have yet to be conquered, and one of the biggest killers in the 23rd century is heart disease, especially with large percentages of the population clinically obese.

All citizens of the Federation are entitled to free health care via the Federal Health Service (FHS), although waiting lists for expensive treatments and therapies can be up to 6 months long. As a result, private healthcare organisations, such as Medtech, provide an expensive way to get immediate access to treatments.

Sex, Birth Control And Children

With a population over 10 billion on Earth, and colonial populations pushing the economy to it's limits, people in the Core Systems and especially on Earth are encouraged to have small families, with incentives like tax cuts, free education etc for those who do. Every birth must be authorized by the Federal Health Service, and the health status of parents must be verified.

In the Outer Colonies, birth control is mandatory. Small families are encouraged for different reasons, the main one being to maximise the gene exchange between the colony. Extra DNA material is kept in the colony science labs to increase the gene richness should the colony have to survive long term without a new influx of colonists from elsewhere.

Education

In the Core Systems, children are required by Federal Law to attend school until the age of 18. At 18, a student has the choice of attending a University, or three years of Federal Service. In the Colonies, students begin what is known as 'Obligation' at the age of 16. This involves performing minor duties for the colony for a maximum of 4 hours per day.

New technologies have also changed education significantly. Telepresence technology allows classrooms to virtually stretch across the system. AR technologies are used to teach reading and the names of objects encountered in the surrounding world. Simspaces are used to model lifelike situations and test on their subject matter.

Federal Service

Students completing their education but not wanting to continue to a University are required by Federal Law to take the Federal Orientation Test and complete three years of Federal Service. This involves working for the Federal Government in one of its many branches, including the United Earth Armed Forces, the Federal Health Service, the Federal Transportation Network, and the Federal Labourforce. The pay isn't great, and choice of career path is limited depending on the results of the FOT, but completion of Federal Service usually gives an individual the option of staying on in their chosen profession with a salary increase.

Tourism

Interstellar tourism is very expensive, and a pursuit reserved for the rich and famous. In star systems like Sol, interplanetary cruises are affordable and popular. Offworld packages such as the 'Red Planet' tour of Mars, and the 'Rings of Saturn' cruise are popular and comparable in cost to exotic intercontinental holidays of the 20th Century.

Media

There are a multitude of independent media organisations in the 23rd Century, providing news and current affairs to the populace. The official Federal News Network (FNN), can best be described as an interstellar hybrid of the BBC and CNN. FNN is a quasi-autonomous organisation part-financed by the taxes of the civilian population, and is renowned for its impartial news reporting.

Entertainment

The Federal Network, or FedNet, is the collective term for the technology behind the wirelessly-networked, ubiquitously-connected urban environment of the 23rd century. FedNet provides entertainment in the form of over a thousand digital television and radio channels, information in the form of the Interstellar Web (ISW), communications access for Personal ComLinks etc. Every tax-paying citizen of the United Earth Federation has at least the basic FedNet package. Extra services can be 'bolted on' for a higher subscription fee.

Simspace

The net is awash in virtual spaces, where users with the correct hardware can connect and partake in a virtual world. With the advent of augmented reality (AR) glasses and AR implants, these simspaces can even exist as overlays set against the real world.

Virtual Realms

Some simspaces are entirely virtual realms, complete with virtual rules, landscapes and characters. These vary widely and can be either as down-to-earth or as fanciful as the designer wishes. Many of these realms are public and welcome all comers; others are private and access to them is restricted to only select clientele. Private virtual realms are a favorite meeting place for many shady or illicit deals due to their anonymity, combined with the ability to create virtual demonstrations.

Virtual realms can be hacked but usually require the hacker to have his senses in the real world.

Augmented Reality Tagging

Augmented reality tags are text, images or other bits of information that overlay the real world when looked at through AR glasses or with an AR implant. AR tags frequently convey information the viewer might find useful, such as an item's technical specs, the name of a person being viewed or helpful links to more information about a particular place. Sometimes tags are used to convey editorial content such as reviews of a contact or store. They can also be used to post advertisements or "I was here" scrawlings, sort of like AR graffiti.

Not all AR tags are created equal. When an AR user creates a tag, she posts it to a particular tag cloud. When a user views tags, he typically turns on or off by turning on or off viewing that cloud.

There exist both public and private tag clouds. Public clouds are available for anyone to view. Often they're also such that anyone can post new tags. Others can be viewed publicly, but who can actually posts tags is restricted, or tags are curated. Still other tag clouds are private clouds, and can only be accessed if hacked or if a user is issued an invite.

Posting a tag requires a computer – usually a hand terminal. The user then selects what he is tagging and leaves some content. Tags typically record the time at which they were posted as well as the virtual identity of the poster. A few rare clouds also allow anonymous tags, although these clouds are prone to tag spam.

Every subculture has its own public tag cloud – some have many! This is just one more way that the various subcultures view the world differently. In this case they're quite literally viewing different content.

Most corps have their own private tag clouds, used to tag employees by position, tag unwanted guests and to tag corp equipment for tracking.

Most users only view one tag cloud at a time. This prevents all the tags from the various clouds from adding up becoming a haze, hindering one's vision. For every tag cloud turned up past the first, the viewer may suffer a -20% penalty to all Perception actions. On the other hand, he can see what different clouds say about different things at once.

Transport

Ever since the global economy collapsed in 2084, public service industries such as transport, water & power and health were globalised. Most citizens use the integrated public transport systems, which include MagLev trains and passenger scramjets. With scramjet technology now commonplace, travel time between continents has been cut dramatically. A commercial flight between London and New York now takes just less than an hour. Cars are controlled by intelligent traffic control computer systems on major intercity routes, but manual control is still allowed on local road networks.

Interplanetary and interstellar travel is still an expensive business. Most people who travel are either company employees, military personnel or government staff. There are no commercial passenger services out beyond the Core Systems. Travellers must negotiate their own ticket prices.

Youth Culture

Subcultures are almost like an extra extended family. They provide social support when the corps don't see profit in it. They are a way for people to meet. They reaffirm people's beliefs. They have their own celebrities, AR tag clouds, net nodes and styles of interaction. In many ways, subcultures are the new neighborhoods in a world infatuated with telepresence.

A sampling of minor subcultures is listed in brief below:

- **Bunkers:** A relatively new subculture, Bunkers believe the transience of human settlement patterns has undermined the fabric of society. They argue for a more stationary existence, claiming that telecommuting and remote operations has made this easily feasible.
- **Postals:** Postals are a radical outgrowth of the Techno subculture. They seek to become post-human through augmentation and genetic modification, engaging in a greater degree of alteration than is socially acceptable, even among the Technos.
- **Tribals:** Tribals are a satellite of the Neoret subculture. They romanticizes the past tribal structures of humanity. Often they can be seen in urban environments, squatting in the crumbling shells of buildings and staking out territory in small gangs.
- **Virtuals:** Virtuals are a subculture that collectively fetishizes the net, claiming that meatspace is mostly obsolete and that the pinnacle of human expression is only reached in simspaces, where reality itself can be molded.

The Solar System

by Wikipedia, Seth Johnson, John Ossoway, David Pulver, Thorin Tabor, Matthew Grau & Alex Guillotte

"We used to look up at the sky and wonder at our place in the stars, now we just look down and worry about our place in the dirt."

Joseph Cooper – *Astrogator*

In the decades that followed in the twentieth century of human history, humans left the surface of Earth and took to the skies. First they used aircraft to travel around their planet through its atmosphere. Then they left the planet using spacecraft to reach into orbit and then to the surface of Earth's moon. Caught up in the excitement of a "space race", dozens of unmanned probes were cast into space, helping humanity to learn about other planets in the solar system as well as revealing the enormous wealth of raw materials that awaited them if they could ever reach them.

Much as humanity's journey around its home planet was undertaken in fits and starts, its first steps into space proceeded in the same way. After those heady early days, humans maintained only a small toehold in space through orbital stations around their home planet. Progress only came years later when humanity took a bold leap through space to Earth's nearest neighbor, the planet Mars. Later expeditions included colonists who went to stay. These scientists, engineers, and laborers developed the terraforming technologies needed to undertake the long project of turning Mars into a second home for humanity.

The Foscolo Drive solved the worlds' resource pressures by opening new frontiers in the solar system. Scouting and science expeditions ventured to most major bodies in the system, the announcements of first footsteps on yet another world soon becoming a routine feature of news feeds. But the main frontier for the first wave of expansion was the belt of asteroids between Mars and Jupiter, where increasingly rare materials on Earth or Mars could be found in abundance. Soon the asteroid belt was just "the Belt" and those who called it home were "Belters".

Whether small or large, every mining operation in the Belt measured their operations not just in what they managed to extract, but in what their human crew needed to survive while doing so, their "consumables". Ships that had taken colonists to establish Helium-3 refineries on the moons of Saturn had been retooled to return with loads of water-ice from the near-infinite supplies in the planet's rings. Eventually a tiny outpost was even established on one of the moons of distant Uranus, but humanity wasn't only pushing outward.

Space Travel in the Solar System

Hydrogen, Nitrogen, Oxygen and other chemical fuel engines are simple liquid/gas fuel rockets. Engines of this type were created by humans in the early 20th century, and used for short range space flight, including on aerospace craft for orbital injection burn. By the 23rd Century, chemical rockets have been all but superseded by fusion drives and the reactionless displacement drive.

Propulsion systems in use by spacecraft in the late 23rd century range from the now archaic chemical rocket engines to the F-Drive. Most ships equipped with reactionless displacement drives are capable of a constant 1g acceleration in deep space. Military craft can usually exceed this, pushing their acceleration up to 3g, sometimes higher, though extended operations at high acceleration can cause damage to both crew and vessel.

The following table can be used to compute the distance traveled, in astronomical unit, with various travel times and accelerations.

Distance traveled Table

Travel time (days)	Acceleration (g)							
	1.0	1.1	1.2	1.4	1.5	1.8	1.9	2.5
1	0.24	0.27	0.29	0.34	0.37	0.44	0.47	0.61
2	0.98	1.08	1.17	1.37	1.47	1.76	1.86	2.45
3	2.20	2.42	2.64	3.08	3.30	3.97	4.19	5.51
4	3.92	4.31	4.70	5.48	5.87	7.05	7.44	9.79
5	6.12	6.73	7.34	8.57	9.18	11.01	11.63	15.30

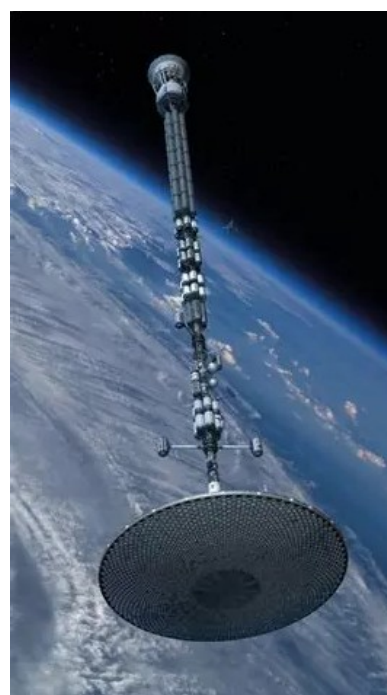
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6	8.81	9.69	10.57	12.34	13.22	15.86	16.74	22.03
7	11.99	13.19	14.39	16.79	17.99	21.59	22.79	29.98
8	15.66	17.23	18.80	21.93	23.50	28.20	29.76	39.16
9	19.83	21.81	23.79	27.76	29.74	35.69	37.67	49.56
10	24.48	26.92	29.37	34.27	36.71	44.06	46.50	61.19
11	29.62	32.58	35.54	41.46	44.42	53.31	56.27	74.04
12	35.25	38.77	42.29	49.34	52.87	63.44	66.97	88.11
13	41.36	45.50	49.64	57.91	62.05	74.46	78.59	103.41

The following table can be used to compute the travel time within the Sol system, assuming a constant acceleration and deceleration of 1 g with a move in a straight line. Considering a displacement with an elliptic trajectory, add (20 + 1d10)% to the trip duration.

Travel time Table

	AU	Period (years)	Time travel (days)
Mercury	0.39	0.24	1.78
Venus	0.72	0.62	2.43
Earth	1.00	1.00	2.86
Eros 433	1.46	1.76	3.45
Mars	1.52	1.88	3.53
Vesta 4	2.36	3.63	4.39
Juno 3	2.67	4.36	4.67
Ceres 1	2.77	4.60	4.75
Jupiter	5.20	11.86	6.52
Saturn	9.54	29.46	8.83
Uranus	19.19	84.02	12.52
Neptune	30.07	164.78	15.67
Pluto 134340	39.48	248.40	17,96



The Sol System

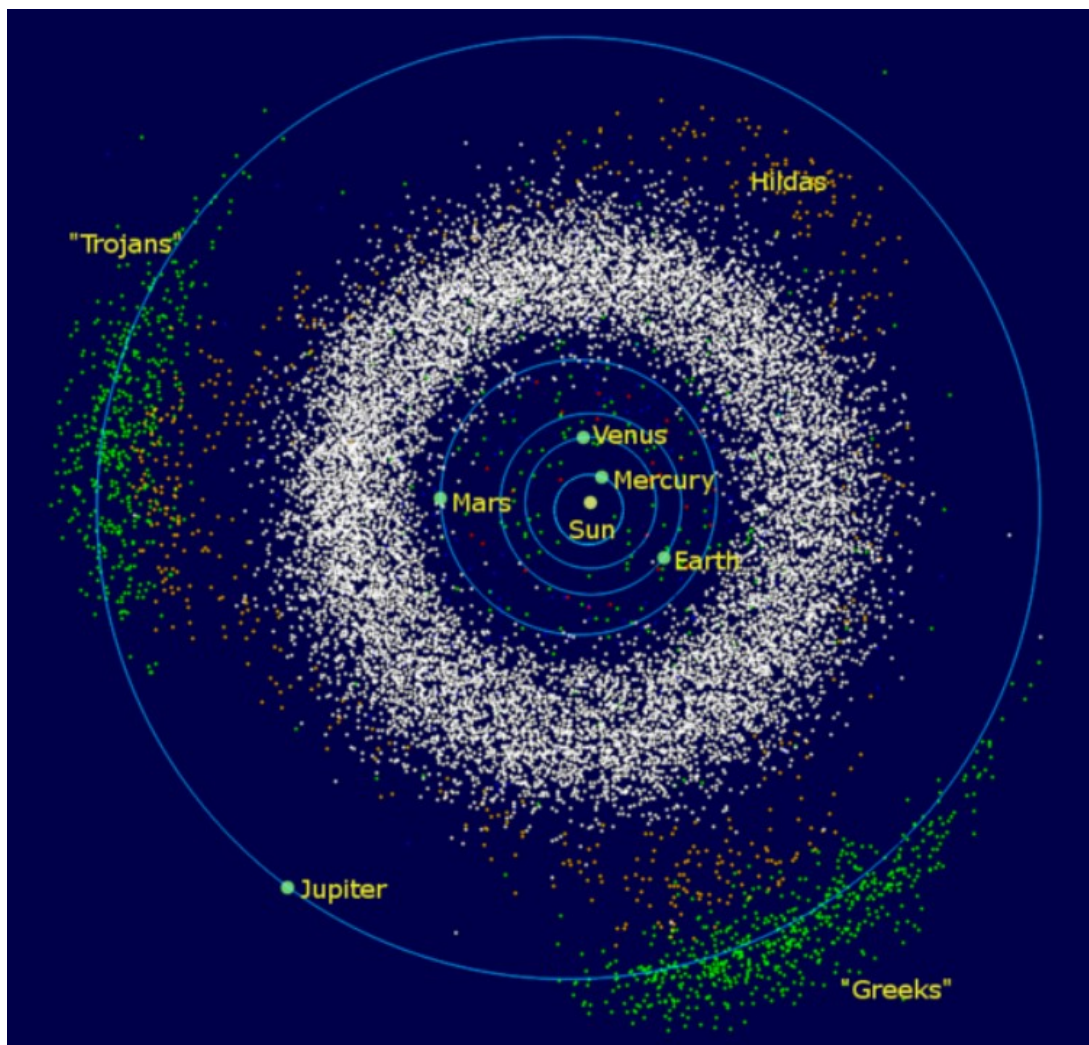
Federated Colonies Zone 1 comprises all planets in the Sol system, and is controlled directly by the UEF government. Territory within the Sol System that is not on the planet Earth is not subject to national or corporate appropriation by claim of sovereignty. Colonies and outposts within this region are not considered to be the territory of any one nation or corporation. This means no territory within this region can declare itself a nation, independent of UEF control.

The Sol System Table

System	Colony	Class	population	Distance from planet	Distance from Sol
Inner	Earth	1	10 000 million	N/A	1au
Inner	Lagrange L1 (Unity)	station	70 000	345 400km	1au
Inner	Lagrange L4 (Zenith)	station	490 000	384 400km	1au
Inner	Lagrange L5 ('junk jungle')	station	45 000	384 400km	1au
Inner	Luna (Armstrong)	3	10 million	384 400km	1au

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Inner	Mars	2	100 million	N/A	1.5au
Belt	Eros 433	3	500 000	N/A	1.13 – 1.46au
Belt	Juno 3	3	40 000	N/A	1.99 – 3.36au
Belt	Pallas 2	3	30 000	N/A	2.13 – 3.41au
Belt	Vesta 4	3	72 000	N/A	2.15 – 2.57au
Belt	Ceres 1	3	3 million	N/A	2.56 – 2.98au
Belt	Hygiea 10	3	24 000	N/A	2.78 – 3.50au
Outer	Io (Jupiter I)	3	10 000	421 800km	4.95 – 5.46au
Outer	Europa (Jupiter II)	3	1.4 million	671 100km	4.95 – 5.46au
Outer	Ganymede (Jupiter III)	3	50 000	1 070 400km	4.95 – 5.46au
Outer	Callisto (Jupiter IV)	3	250 000	1 882 700km	4.95 – 5.46au
Outer	Tethys (Saturn III)	3	10 000	294 660km	9.04 – 10.12au
Outer	Dione (Saturn IV)	3	30 000	377 400km	9.04 – 10.12au
Outer	Rhea (Saturn V)	3	80 000	527 040km	9.04 – 10.12au
Outer	Titan (Saturn VI)	2	4.7 million	1 221 830km	9.04 – 10.12au
Outer	Phoebe (Saturn IX)	outpost	100	12 944 000km	9.04 – 10.12au
Outer	Pluto 134340	outpost	1 000	N/A	29.66 – 49.31au



SOL



Main Star	Sol
Type	G2 V
Age	4.6 billion years
Distance from Sol	n/a

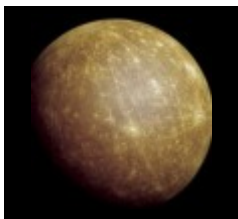
Description:

Still the centre of the galaxy as far as the majority of humanity is concerned, Sol is a yellow-orange, main sequence dwarf star (G2V) about 4.6 billion years old.

Sol radiates a constant stream of ionized particles known as the solar wind. These particles flow outward from the star at an average speed of 400 km/second. They eventually make their way to the very edge of the solar system, where they encounter charged particles from interstellar space. This boundary, known as the heliopause, marks the Sol system's edge some 150 AU from the sun.

The sun's emanations are not constant; instead, they vary moment to moment with the solar weather. These variations are unpredictable, and those caught unaware can suffer major damage. The most violent changes occur in the form of solar flares – a sudden ejection of electrons, ions and other particles from the corona of the sun.

Orbit 1: Mercury



Orbit Radius	0.47 au
Type	Rock
Density	0.98
Diameter	4879 km
Gravity	0.38 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	88 days
Rotational period	56.8 days

TEMPERATURE / SATELLITES

Polar	-170°C
equatorial	430°C
Satellite	0

UNUSUAL FEATURES

Large spaceport at Goethe crater.

WATER

Water	Ice sheets
% water	0
% ice	5
% clouds	0

MINERAL RESOURCES

Metal ore	55
Radioactive ore	2
Precious metal	15
Raw crystal	0
Precious gems	0

Description:

This planet is the closest to the sun. It is also the second-smallest planet. Although its iron core makes it the densest body in the solar system after Earth, Mercury has practically no atmosphere. As a result, day-night temperature variations are extreme, ranging from -170°C in the shade to 430°C in the sun. Amazingly, water ice exists in the perpetual shadows of some polar craters. The combination of ice, abundant solar power, and mineral resources made Mercury an attractive location for colonization.

Mercury's surface is a mix of heavily cratered highlands and smoother lowlands. The Caloris event, 3.85 billion years ago, was a giant asteroid impact that blew off much of Mercury's surface crust. It created a 1350 km wide crater halfway between the equator and north pole, marked by concentric blocks of mountains around its edges. The Caloris impact was so powerful that seismic waves carried through the planet creating the Caloris impact, a zone of jumbled, km high

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hills and valleys the size of western Europe. Both the impact basin and the Guido d'Arezzo are rich in heavy metals, although they are located far from the more habitable poles.

Mercury is blessed with rich deposits of heavy metals, as well as some He-3. The largest colony, at Goethe Crater on the north pole, was founded by the European Federation and corporations. They have built a 150-km-long mass driver to accelerate loads of metal to Earth-Lunar space and established several mining bases across the Caloris Basin.

Four other nations also have mining colonies. Sharing the north pole are the United Americas (at Purcell crater) and the Russian Republic (at Aristoxenis crater). On the south pole, the Chinese Consortium has a large facility at an ice-rich Chao Meng-Fu crater. Many of the inhabitants are contract workers rather than permanent immigrants; China and the United Americas also use androids.

The other mayor industry is the use of solar power re produce anti-matter. The European, Chinese, and Americans anti-matter factories (mostly built on the equator) use hundreds of square km solar cell to power large particle accelerator facilities that create anti-hydrogen at a rare of a few grams week. The value of anti-matter has resulted in institutional paranoia. Officials are alerted for spies, security is tight, and any industrial accident is regarded as potential sabotage. All national bases have military garrisons.

Orbit 2: Venus



Orbit Radius	0.73 au
Type	Hot House
Density	0.95
Diameter	12,104 km
Gravity	0.91 G

ATMOSPHERICS / ORBIT

Atmosphere	Super dense
Pressure	90
Composition	Carbon dioxide/Nitrogen
Orbital period	225 days
Rotational period	243 days

TEMPERATURE / SATELLITES

Polar	462°C
equatorial	462°C
Satellite	0

UNUSUAL FEATURES

Cloud cover

WATER

Water	None
% water	0
% ice	0
% clouds	90

MINERAL RESOURCES

Metal ore	40
Radioactive ore	10
Precious metal	3
Raw crystal	0
Precious gems	0

Description:

Venus is a hellish pressure cooker of a planet, starkly, hostile to life. The planet is almost as large as Earth, and similar in composition, but there the resemblance ends. Its rotation is slow and retrograde to Earth's, so the sun rises in the west and sets in the east. Venus has an atmosphere of super dense carbon dioxide, and its surface is completely shrouded in pale yellow clouds of sulfuric acid. Its proximity to the sun and dense cloud cover create an extreme greenhouse effect, resulting in temperatures hot enough to melt lead. The crushing pressures on the surface are equivalent to those 900 meters beneath Earth's ocean. Daytime On Venus lasts for months, and is illuminated by dim, lemon-colored, omnidirectional light. The long night are pitch black; the stars are never visible from the surface. Venus has two main "continents," the north-polar Ishtar and equatorial Aphrodite, each elevated km above the surrounding terrain. There is no water. The surface is a gloomy, barren desert of basalt bedrock, sand dunes, fractured terrain, and old lava flows.

A few humans live and work on Venus, but their gear and habitats must be expensively engineered to withstand the extreme temperatures and pressure. The major base, Research Station Aphrodite, is ran by the European Federation with a transient population of 1,100. Most of Venus' human population are planetary scientists, terraforming engineers, and technicians. The latter call it 'the Hell Hole,' and spend their time maintaining or redesigning systems that degrade under the environmental stress. Its primary mission is to study Venus to discover information relevant to Earth's own evolution and to lay the groundwork for a long-term Venusian terraforming project (which will likely take centuries).

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Aphrodite maintains scientific outposts scattered across the planet and various facilities in orbit. Visiting scientists from other nations also rent space at Aphrodite for their own projects.

Because of its location nearer to the center of the solar system, and relatively short solar year, Venus often makes for an ideal transit hub, even when traveling from Earth to Mars or the outer system. This traffic is seasonal, with a peak that's reached when Earth and Mars are on opposite sides of their orbits. Nevertheless, traffic to and from various stations in the Belt keep the station busy even in the off-season.

Gerlach is a typical cylindrical O'Neill habitat. It is 1 kilometer in diameter, 4 kilometers long, and has a total population of almost 12,000. It is the major Venusian spaceport and also the oldest inhabited location on or in orbit around Venus. Initially smaller, the focus of its construction was to establish a base to conduct research on the Venusian atmosphere, construct more habitats, and eventually terraform Venus. The station's interior was occupied by several enormous and roughly pyramidal arcologies, each 250 meters high and almost 900 meters across as the base. Studded between these huge arcologies were dozens of small biorestores that between them contained a huge diversity of Earth life living in a close approximation of its natural habitat. These reserves served as a symbol for the proposed terraforming effort – the builders vowed that the descendants of the plants and animals on Gerlach would eventually live on the Venusian surface.

Orbit 3: Earth – homeworld



Orbit Radius	1 au
Type	Terran
Density	1
Diameter	12756 km
Gravity	1 G

ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1
Composition	Oxygen/Nitrogen mix
Orbital period	365 days
Rotational period	24 hours

TEMPERATURE / SATELLITES

Polar	-35°C
equatorial	40°C
Satellite	1

UNUSUAL FEATURES

High population

WATER

Water	Oceans
% water	70
% ice	5
% clouds	59

MINERAL RESOURCES

Metal ore	50
Radioactive ore	20
Precious metal	5
Raw crystal	15
Precious gems	5

Description:

Seat of power of the United Earth Federation, and the cradle of humanity, Earth is the heart of the galaxy as far as humanity is concerned. It is home to 10 billion – going on 11 billion – individuals, most of whom are born, go about their lives and die with barely a thought about what it's like in space.

Centuries of unchecked industrialisation with little or no concern for the long-term environmental impact has left much of Earth a polluted, overcrowded and resource-poor planet. The advent of fusion power and other 'clean' energy sources such as orbital solar power satellites, along with green reclamation projects have helped to slow this trend, but the damage has already been done.

In 2222, the outbreak of the Crawling Chaos quantum computer virus led humanity near on the edge of extinction. The ensuing blackout was a very hard time for all the survivors of the solar and inner systems, but mankind managed to lift its head out of the abyss. A brutal brake was put on the development of AIs and the economy made a backward bound.

However, in just over a century, wealth and social status on Earth range from the most desperate poverty and oppression in history to unprecedented levels of riches and power. Those who rule the powerful Corporations have every possible trapping of wealth, including mansions, resorts, travel, obedient servants, private armies and more.

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Beyond the Corporate preserves and the houses of the rich and the politically powerful, there are many millions of people who live uneasy middle-class lives in a world with few certainties. And then there are the dispossessed; billions of people who live in the vast urban sprawls, working at menial jobs or surviving on government subsidies. Or preying on others.

There are many stations and space habitats in orbit around Earth. The largest is Unity Space Station, one of the largest man-made structures in space, a spaceport housing over 70,000 people at any one time. This is also the base of the MSF Sol aerospace arm of the ICM. Earth's moon, Luna, is the most heavily populated moon in all of the Federal Colonies, with over 10 million people living in and around Armstrong Colony.

Orbit 3: The Lagrange Points – Space Stations



Orbit Radius	0.1 au
Type	Station
Density	1
Diameter	variable
Gravity	1 G

ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1
Composition	Oxygen/Nitrogen mix
Orbital period	variable
Rotational period	variable

TEMPERATURE / SATELLITES

Polar	18°C
equatorial	18°C
Satellite	0

UNUSUAL FEATURES

Artificial satellite.

WATER

Water	None
% water	0
% ice	0
% clouds	0

MINERAL RESOURCES

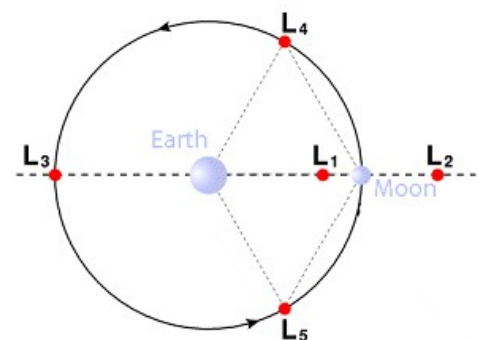
Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

These are locations in Earth-Lunar space where the gravitational pull and orbital forces of the Earth and Luna cancel each other out. There are five Lagrange points, but L4 (located 60 degrees ahead of Luna's orbit around the Earth) and L5 (located 60 degrees behind its orbit) are especially stable. An object placed there will stay there, orbiting the L4 or L5 point while being carried along by Earth and Luna as they orbit the sun. National space agencies and industrial combines began placing hardware (ranging from telescopes to service stations) in the L4 and L5 points in the early 21st century. In the 2040s the first manned stations were built, supporting Lunar and asteroid prospecting missions. Between 2060 and 2090, Earth crossing asteroids were moved into the L4 and L5 points for mining. They provided the raw materials to build the many industrial stations and space habitats that exist today. The majority of people live in hollowed-out asteroids or smaller work stations. Only a few giant O'Neill cylinder colonies were constructed, and only after growing space populations, fusion power, and asteroid retrieval made them affordable.

Colonies in the same Lagrange point are usually within 500 km of each other, the closer they orbit the Lagrange point, the more stable their orbits. Their close proximity means that cheap, lightly built space taxis or scooters can be used to visit neighboring stations.

- L1: Unity Space Station
- L4: Zenith Space Station
- L5: "junk jungle"



Lagrange 1

L1 was built in an asteroid that was towed from the Asteroid Belt in the early 22nd century. Construction of the Unity Space Station was completed in 2140, and it was initially a UEF military base. As time passed, civilian and corporate facilities have slowly but surely established a permanent presence on the station. These are kept a discrete distance from the military base but go a long way to help make a tour on Unity more pleasant and bring in a considerable income. Among the jumble of arcologies, geodesic domes and lunar concrete superstructures, there is a large space port, holiday resort, marine barracks and dry dock, as well as many privately owned corporate structures.

Unity Station is set up to have virtually no spin, the same face always faces towards Earth. The Station decks are all stacked one above the other, with 'down' being towards the Earth. Down is maintained by a comprehensive array of grav field generators. Four Shinohara Heavy Industries fusion reactors supply the stations power requirements with additional power coming from solar arrays. The majority of the stations power output is diverted to the hi efficiency/low output thrusters located at the station base. These motors are in almost continuous operation in order to maintain Unity in a stable L1 orbit. Technically this makes Unity Station the largest space vessel anywhere in known space!

A number of large military docking stations are tethered above the asteroid by 1m thick carbon nanotube cables, along which freight/passenger cars travel. Docking pits are available to smaller vessels. These pits are all in excess of 100m in diameter and can provide berths for hundreds of small ships in bays in the pit wall. The Station has a permanent crew of 5,127, and is able to house a further 65,000 transients. Two full wings of UEAF aerospace fighters are permanently stationed at the station, together with a squadron of dropships. In addition, at least half a dozen military warships of up to cruiser class can always be expected to be found docked here.

As would be expected of Earth's prime military base and volume control facility Unity station rigorously controls its surrounding volume. Approach within 100,000km (note that this includes Luna) is limited to a narrow range of approach cones, divergence from these traffic cones is regarded as a very serious infringement and is punished by revocation of the crews flight status and impoundment of the vessel at the very least (destruction without warning is a distinct possibility). Much of Unity's crew are tasked with space control and as such Unity Station has the finest sensor suite in Human space. Linked to Unity are a huge constellation of surveillance satellites and ships, all feeding information back to the central monitoring AI and human overseers. Little happens within the entire Sol system that Unity does not detect, whether or not this is noticed is another thing, it will be recorded a may be studied later. Unity is also the command and control centre for the Artemis Net, the array of deep space satellites and monitoring stations orbiting out near the edges of the Sol system yet inside the Heliopause/Termination Shock. The Artemis Net is capable of detecting F-Space activity up to half a light year away from Sol, out beyond the Oort Cloud.

Thousands of travellers pass through Unity every day, either inbound from the colonies, or heading out from Earth. Many thousand earn a living by working at Unity, either as part of the Federal workforce, or as one of the many corporate employees who work at both the uptown resorts and private villas, and the downtown clubs and bars. Vacations on Unity are often renowned (or infamous) for their exotic nature. In special large low G caverns tourists can enjoy the experience of flying under their own power, or can try swimming in the zero G floating 'pools' (SCUBA required), or more exotic activities.

All ships arriving at Earth must pass through the Orbital Customs & Excise location at Unity Space Station Spaceport. Here they must strip and be decontaminated (same goes for belongings). Transportation of any undeclared organic substance that is alien in origin is illegal. All such items must pass through ITC Quarantine to make sure it is safe and will not contaminate Earth's biosphere.

Lagrange 4

L4 is the most gentrified of the two Lagrange points. It was the first to be extensively settled, and is now home to a few dozen large colony habitats with a combined population of half a million people, as well as numerous smaller manned and unmanned stations. Most of the stations were established by governments, major corporations, or well-funded ideological groups.

L4 is also the orbital headquarters and prime transit facility for FLEA personnel entering or leaving Earth-Lunar territory. Zenith space station is the administrative centre for all FLEA shipping.

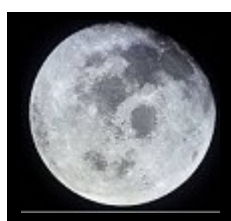


Lagrange 5

L5 is known as the "junk jungle." A great deal of older hardware, L4, and Lunar orbit has been towed out to L5 by salvage teams, simply to reduce the risk of debris collisions. It is often resold at scrap prices to whoever wants it, as building material or low-rent habitations. A few captured asteroids are also present, some so heavily mined that they were judged structurally unsound.

This collection of tin cans, "Swiss cheese" asteroids, and other junk is presently home to a sizable population of scavengers, exiles, dissidents, and homesteaders. The L5 explosion occurred in the 2070s, after the development of inexpensive anti-radiation nano made it possible to live in much cheaper space habitats by skimping on shielding. L5 has become a huge trailer park in space. Its inhabitants include many economic refugees and members of fringe ideological groups who split off from orbital stations, L4 colonies, or Luna, to seek their fortunes or to escape persecution. L5 colonies range in population from a few dozen to several thousand people; the smaller colonies are not self-supporting, but survive through contract work for the larger ones. The total population of L5 is uncertain, since some of the ideological colonies have used artificial wombs, it could be 40,000 – 50,000.

Orbit 3 (Earth 1): Luna Class 3 Colony



Orbit Radius	384 400km
Type	Rock
Density	0.61
Diameter	3476 km
Gravity	0.165 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	27.3 days
Rotational period	27.3 days

TEMPERATURE / SATELLITES

Polar	-151°C
equatorial	104°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice sheets
% water	0
% ice	traces
% clouds	0

MINERAL RESOURCES

Metal ore	45
Radioactive ore	1
Precious metal	10
Raw crystal	0
Precious gems	0

Description:

Luna, the natural satellite of Earth, is a large rocky body like the four inner planets, although it has only one sixth Earth's gravity, no atmosphere, and no magnetic field. It was created 4.5 billion years ago when a giant asteroid struck Earth and blasted debris into space; this debris coalesced to form the moon. Luna is tidally locked with Earth, so the near side always faces Earth and the far side always faces away. There is no "dark side of the moon;" really, as all areas get sunlight half the time, but as on Mercury, some deep craters, near the poles are in permanent shadow. These were discovered to contain small ice deposits.

With no atmosphere to bum up incoming meteors, Luna has been an exposed target in a cosmic shooting gallery for billions of years. The Lunar landscape is dominated by overlapping impact craters. They range in size from a few meters across to the giant South Pole-Aitken Basin (2250 km wide and 11 km deep) on the far side, the largest impact crater in the solar system. The Lunar landscape varies considerably between the near and far sides. Flat maria giant asteroids impact craters whose surfaces were later smoothed over by basalt lava flows cover one-sixth of Luna, and are concentrated on the near side. Most of the far side and much of the near side is made up of the lunar highlands, formed from interlocking large and small craters.

The Lunar surface is covered with regolith, a loose fine-grained material with two major components: dusty rock and mineral particles, and agglutinates, mineral and rock welded together by glass produced in meteor impacts. The regolith is exposed directly to the solar wind. This has seeded it with useful volatiles, including traces of both hydrogen and He-3. In addition, about half the mass of Lunar rocks is made of up of oxygen, and there are also economically useful

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quantities of iron, aluminum, and titanium. However, Luna is incredibly dry, with the only water ice being found intermixed with regolith on the north and south poles.

Luna's population prides itself on being a multinational cosmopolitan society on the cutting edge of Earth's technology. The major industries include He-3 mining (exporting it to Earth), ice and oxygen mining (for domestic consumption and export to Earth-Lunar stations), and heavy manufacturing, especially using processes considered dangerous or polluting on Earth. Much of Luna's infrastructure is owned by the large Japanese industrial Motokatsu-Kyono Combine (MKC), and Lunar Development Corporation (LDC). The importance of He-3 mining to the Lunar economy is declining due to competition with Saturn. The Lunar combines have diversified into manufacturing and tourism, but even so, there are fears that Luna may become an economic backwater.

Armstrong (population 2,540,000) is the largest settlement. It is located in Shackleton Crater on the Lunar South Pole, sitting atop major ice deposits. It is a free city, but under the thumb of Japanese and transnational space corporations.

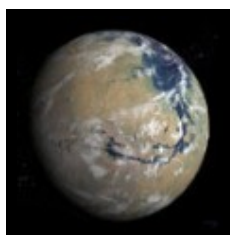
Farside Observatory (population 3000) is located in Tsiolkovsky crater on the far side, and is the oldest settlement on the moon. It is a huge distributed array of radio and optical telescopes. Strict emission control regulations were enforced on Farside to avoid interference with the observatory's activities.

Tranquility Industrial Zone (population 230,000) is scattered in the Mare Tranquility region on the near side. An early center for He-3 mining operations, it also boasts Port Tranquility, the largest surface spaceport, and the adjacent "Helium City" manufacturing center. In this thriving economic zone, synthetics outnumber humans by more than 10 to 1. Much of Helium City is above ground and in vacuum. The zone is now devoted more to industrial activities than He-3 mining.

Moonshadow (population 58,000) is a major tourist center, health spa and adventure park located in a planned community by shadow ice deposits on the north pole.

There are hundreds of other outposts on the moon, from oxygen mines to factory crawlers to science labs. Some of them are owned by individual corporations, others by nations, a few by individuals.

Orbit 4: Mars Class 2 Colony



Orbit Radius	1.52 au
Type	Desert
Density	0.62
Diameter	6794 km
Gravity	0.38 G

ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0.72
Composition	Oxygen/Nitrogen mix
Orbital period	686 days
Rotational period	24 hours

TEMPERATURE / SATELLITES

Polar	-50°C
equatorial	11°C
Satellite	2

UNUSUAL FEATURES

Violent storms.

WATER

Water	Seas
% water	8
% ice	10
% clouds	15

MINERAL RESOURCES

Metal ore	38
Radioactive ore	12
Precious metal	0
Raw crystal	10
Precious gems	8

Description:

Mars in the 23rd Century supports a thriving colony with a population in excess of 100 million. The first planet colonised from Earth, its population can trace their families back generations before reaching Earth-relatives.

By the time the Second Exodus began (2166-96), Mars had undergone over half a century of intensive terraforming. Enough free-standing water now existed to form ice clouds, substantial rivers and lakes and even a small sea in the northern polar regions. Terraforming has also altered Mars' atmosphere. The melting of the southern polar icecap

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released large quantities of carbon dioxide, causing an increased greenhouse effect, raising the average surface temperature of the planet.

Genetically engineered plants were seeded across the planet in vast quantities, which rapidly enriched the atmospheric levels of Nitrogen and Oxygen. The atmosphere on Mars is breathable at ground level, but in a lot of the highlands of the planet an artificial air supply is still required.

Despite all this change, Mars is still plagued by seasonal dust storms, and it's cities are all built using a pyramidal building design, which provides best protection against the sometimes harsh Martian weather. Outside of the artificial G-fields of the colony buildings Mars gravity is still only one third that of Earth.

Mars has some remarkable geological characteristics, including the largest volcanic mountain in the solar system, Olympus Mons (27 km high and 600 km across).

A number of large manufacturing corporations are based on this planet, and this industry is supplemented by large orbital and surface cargo facilities that handle commodities to/from outlying systems. Anchorpoint City, located on Pavonis Mons, is the second largest city and settlement on Mars in the Sol System. It grew up around the base station of the Martian Space Tether to Phobos which touched down on the planet in 2178. Becoming a large transit facility, Anchorpoint is home to the headquarters of megacorporations Motokatsu-Kyono Combine and Wolf-Wiesner-Krupp.

Orbit 4 (Mars 1): Phobos Class 3 Colony



Orbit Radius	17000 km
Type	Rock
Density	0.34
Diameter	11 km
Gravity	0.6 mG

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	synchronous
Rotational period	locked

TEMPERATURE / SATELLITES

Polar	-112°C
equatorial	-4°C
Satellite	0

UNUSUAL FEATURES

geostationary orbiting.

WATER

Water	0
% water	0
% ice	12
% clouds	0

MINERAL RESOURCES

Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Phobos is the larger of the Martian moons, orbiting 17,000km from the Martian surface. It was moved from 6000km to 17,000km into a geostationary orbit in 2111 to become the orbital anchor for the Martian Space Tether. Phobos is a small, irregularly shaped object with a mean radius of 11 km and is seven times more massive than the outer moon, Deimos.

Before completion of the Elevator, Phobos was the port of entry for Mars, and home to almost 10,000 people. John Carter Spaceport is one of the busiest commercial space ports in the Federal Colonies, its sprawling network of domes, pyramids and docking towers dominates the entire 27km length of the space-facing side of Phobos.

On the other side of Phobos from John Carter Spaceport, Ares Fleet Base is the largest military base in the UEF, home port of the Sol Defence Fleet (the UEAF 1st Fleet), and home to over 30,000 military personnel.



Orbit 4 (Mars 2): Deimos Class 3 Colony



Orbit Radius	23460 km
Type	Rock
Density	0.27
Diameter	6.2 km
Gravity	0.3 mG

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	30.3 hours
Rotational period	synchronous

TEMPERATURE / SATELLITES

Polar	-50°C
equatorial	-50°C
Satellite	0

UNUSUAL FEATURES

WATER

Water	0
% water	0
% ice	2
% clouds	0

MINERAL RESOURCES

Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Deimos is the smaller and outermost of the two natural satellites of Mars. As seen from Mars, Deimos has an angular diameter of one twelfth of the width of the Moon as seen from Earth, and therefore appears almost star-like to the naked eye. The satellite is presently hosting a deep radar station for the military.

Orbit 5: The Main Belt



The Main Belt is a region between the orbit, of Mars and Jupiter, 2 to 4 AU from the sun, that contains the majority of asteroids in the solar system. Asteroids are rocky bodies which orbit the sun, but are too small to be considered planets themselves. They are leftover detritus from the birth of our solar system, prevented by Jupiter's strong gravity from forming into a planet. That was 4.6 billion years ago. Since then, countless collisions have shattered most larger asteroids into smaller ones, and left many of the remainder nothing more than fragments loosely held together by gravity.

Asteroids vary greatly in size. There are 16 large Main Belt asteroids 200 km or more in diameter, of which the biggest is Ceres, a spherical mini planet 850 km across. There are thousands of mid-size asteroids between 15 and 150 km in diameter, over a million with diameters of 800 meters or more, and billions of orbiting rocks from boulder to pebble size. Even so, the total mass of all asteroids, if they could be combined together, is barely enough to form a single moon-sized object about half the diameter of Luna.

Except for a few large bodies like Ceres and Vesta, asteroids tend to have irregular shapes, much like chunks of gravel. Sometimes two asteroids are mashed together as a result of a collision, and end up with very odd shapes.

Asteroids come in several distinct types. The asteroids in the innermost region of the Main Belt (2 to 2.5 AU from the sun) tend to be stony-irons, made of a mix of iron and silicate rock, with a smattering of large chunks of nickel-iron. The middle regions of the Belt from 2.5 to 3 AU are a blend of stony-irons and soot-colored carbonaceous asteroids. These are formed from frozen hydrocarbon sludge mixed with rock and metal chunks, and, from 3 AU onward, water ice. From 3 AU to 4 AU, carbonaceous asteroids are the dominant type. Almost all asteroids contain traces of rare minerals, ranging from platinum to uranium. Since even a fairly small asteroid can mass billions of tons, even trace amounts can represent vast concentrations of ore.

Despite the mineral wealth of the Belt, the asteroids are not alive with hardy prospectors hunting for platinum, gold, uranium or even ice. Asteroids are mined, but the process is different.

The Jupiter Trojans

The Jupiter Trojans are a large group of asteroids that share the orbit of Jupiter around the Sun. The asteroids are divided into two distinct groups, each distributed throughout elongated, curved regions around one or other of Jupiter's two Lagrangian points of stability, L4 and L5. These respectively lie 60° ahead of and behind Jupiter in its orbit around the sun. The L4 swarm holds between 160,000–240,000 asteroids with diameters larger than 2 km and about 600,000 with diameters larger than 1 km. If the L5 swarm contains a comparable number of objects, there are more than 1 million Jupiter Trojans 1 km in size or larger. All the Jupiter Trojans are named after mythological figures of the Trojan War.

■ The Greek Camp

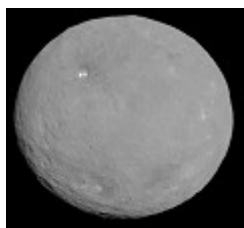
The Trojans orbiting ahead of Jupiter, around Lagrangian Point L4 are collectively referred to as the Greek Camp. There are 1179 objects recorded as orbiting Jupiter L4, the largest being 624 Hektor at 370 × 200km.

The Greek Camp is location of the Telephus Observatory. This swarm of 200 individual robot telescopes is controlled from the scientific base on the asteroid Telephus. The robot telescopes are each equipped with a Delta Level AI which allows them to reposition themselves based on orders from Telephus. Combined, the robot telescopes allow for high resolution imaging of distant stellar objects.

■ The Trojan Camp

The Trojans orbiting behind Jupiter, around Lagrangian Point L5 are collectively referred to as the Trojan Camp. There are 1045 objects recorded as orbiting Jupiter L4. The Trojan Camp is the home of the Trojan Pirates, a loose-knit coalition who engage in smuggling, and small-scale acts of piracy against commercial and private shipping in and around the Circum-Jove system.

Ceres 1



Ceres is the largest known asteroid (955 km in diameter, with an orbital period of 1,683 ESD), the only dwarf planet in the inner solar system, and the first asteroid discovered by humanity.

Ceres is the site of Ceres station, a space station that was one of the first sites of human colonization. Half a generation after humanity arrived there, Hallidor Corporation managed to spin up the asteroid, which gave it a gravity of 0.3 g. The level of gravity changes with each level and there is a noticeable Coriolis Effect.

As the most important port in the Belt, the station has a population of approximately three million permanent residents with an extra half a million transiting through at any given time.

Eight hundred to a thousand ships are docked on Ceres every day.

The top levels of Ceres are a long corridor wrapping around the outer edge of the station, topped by a dome that shows an approximation of sky, meant to comfort visitors and residents alike. Many Belters grow to adulthood staring up at a sight meant to replicate something they've never actually seen. Only the rich and the gainfully employed live up near the faux-sunlit apartments; the rest live deep within the rock, walking on dirt-strewn ground in a world lit by neon and sputtering lamps, cut with the glare of lights on electric carts that whirl their way through the tunnels.

The station has tens of thousands of kilometers of tunnels. Transportation is provided by an extensive tube train network.

The black and grey markets thrive on Ceres, reinforced with dozens of ships crisscrossing the Belt – and virtually any Belter on board a ship might be tasked with helping out their fellows with the acquisition of hard to find goods. Carved crevices and repurposed cargo containers play host to all manner of humanity, from miners to prostitutes to mechanics. Belters congregate around stools in restaurants that sell noodles and whiskey. The gravity lessens the deeper one goes into the poorer sections, and a pronounced Coriolis effect presents itself. Poured liquids curve in the air, while people stumble and suffer from dizziness, nausea, and seasickness millions of miles from the nearest sea. Water on the station is rationed, carefully monitored and trickling down in ever-decreasing amounts from the outer edges of the station.

Ceres' security is handled by the private security firm Black Sun Security, with a staff of mostly Earthers (and Belters who didn't mind the culture or working against their own kind).

Vesta 4



Vesta is one of the largest asteroids in the Asteroid Belt, and the second-most-massive after Ceres. It hosts one of the largest settlements in the outer planets. Vesta is a rocky asteroid with a diameter of 525 km, and an orbital period of 1,326 ESD. Vesta has a population of 72,000 mostly researchers and engineers.

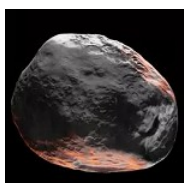
Exogenesis Station houses the Wallace corporation's laboratories and manufacturing complex. The complex has a special research unit to carry out illegal operations on bioroids (vivisection, experimentation,...). Niander Wallace also has the habit of sending embarrassing people for his business or journalists who are too curious.

Pallas 2



Pallas is the third-largest asteroid in the Solar System by both volume and mass, and the second asteroid discovered by humanity. It is a rocky asteroid with a diameter of 513 km and an orbital period of 1,685 ESD, slightly smaller than Vesta. It hosts one of the oldest stations, Pallas Station, in the outer planets. The station itself has a long history of a refinement station for the mining operations of the Belt. Due to this legacy, it continues to have its infrastructure maintained and upgraded, making use of its older equipment as overflow capacity.

Hygiea 10



Hygiea is the fourth-largest asteroid in the asteroid belt and is considered the largest of the carbonaceous asteroids, with a diameter of about 434 km and an orbital period of 1,652 ESD. The surface appears to be heavily cratered, indicating a long history of collisions.

Yametei Station houses a population of 24,000. It is the Main Belt headquarters of Wolf Wiesner Krupp (WWK) and a colony of Japan. Its major activity is manufacturing high-technology goods (such as industrial cyberware, 3D printers, and fusion reactors) for sale to other outer system operations.

Eros 433



Eros is a large, S-type, near-Earth asteroid approximately 34.4 x 11.2 x 11.2 kilometers in size. It is the second-largest near-Earth asteroid. It's a part of the Asteroid Belt, but it's called a "Mars-Crosser" because its orbit crosses the orbits of both Earth and Mars. It is the first known asteroid to come within the orbit of Mars. Eros has been compared to the shape of a lumpy potato. A very large lumpy potato that would wipe out all but the simplest forms of life on Earth if it hit it. The orbital period of Eros is approximately 1643 ESD.

Eros is the site of Eros Station, a space station that was one of the first sites of human colonization, which supports a population of a half million humans (a little more than Ceres had in visitors at any given time).

Roughly the shape of a potato, it had been much more difficult to spin up, and its surface velocity was considerably higher than Ceres' for the same internal g. The internal caverns of Eros had been the birthplace of the Belt. From raw ore to smelting furnace to annealing platform and then into the spines of water haulers and gas harvesters and prospecting ships. Eros had been a port of call in the first generation of humanity's expansion. From there, the sun itself was only a bright star among billions.

The economics of the Belt had then moved on. Ceres Station had spun up with newer docks, more industrial backing, more people. The commerce of shipping moved to Ceres, while Eros remained a center of ship manufacture and repair. On Ceres, a longer time in dock meant lost money, and the berth fee structure reflected that. On Eros, a ship might wait for weeks or months without impeding the flow of traffic. If a crew wanted a place to relax, to stretch, to get away from one another for a while, Eros was the port of call. And with the lower docking fees, Eros Station found other ways to soak money from its visitors: Casinos, Brothels, Shooting galleries.

Its big docks were in five main clusters around the station. The old shipyards protruded from the asteroid, great spiderwebs of steel and carbon mesh studded with warning lights and sensor arrays to wave off any ships that might come in too tight.

Orbit 6: Jupiter



Orbit Radius	5.2 au
Type	Gas Giant
Density	0.22
Diameter	142,984 km
Gravity	2.53 G

ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.38
Composition	90% Hydrogen/10% Helium

WATER

Water	None
% water	0
% ice	0

Orbital period	11.85 years
Rotational period	9 hrs 55 min

% clouds	100
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TEMPERATURE / SATELLITES

Polar	-108°C
equatorial	-108°C
Satellite	63

MINERAL RESOURCES

Metal ore	?
Radioactive ore	?
Precious metal	?
Raw crystal	?
Precious gems	?

UNUSUAL FEATURES

Cloud cover.

Description:

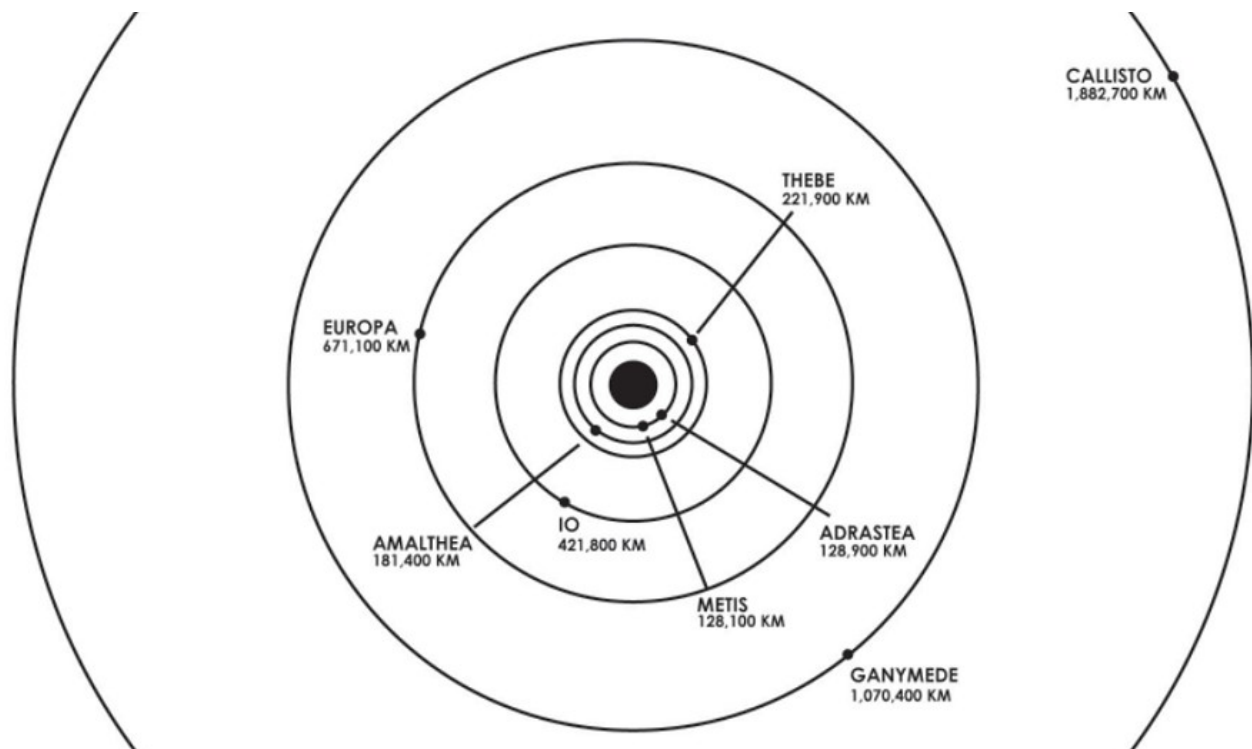
Jupiter is the fifth planet from the Sun, orbiting at an average distance of 5.2 AU, and also has the distinction of being the largest planet in the Solar System. To give this some perspective, Jupiter is two and a half times as massive as all the other planets in the solar system combined. It is massive enough to easily swallow a thousand Earths. Jupiter, together with Saturn, Uranus and Neptune, is classified as a gas giant. Jovian is the adjectival form of Jupiter, and while it is has to some extent used to describe any large gas giant, it is still used primarily to describe the Jupiter system.

The upper atmosphere is arranged into wide parallel bands of different latitudes called tropical regions. The light-coloured bands are referred to as zones and the dark ones as belts. Temperature variations and chemical reactions cause their shades of yellow, brown, orange, and red. Interactions between these different regions cause violent storms and atmospheric turbulence. Winds of up to 600 km/h and lightning discharges that is a thousand times as powerful as on the Earth are commonplace in the Jovian atmosphere.

Perhaps the most famous feature of Jupiter's atmosphere is the Great Red Spot, a persistent anticyclonic storm that is large enough to contain two or three planets the diameter of the Earth. The storm has been in existence since at least 1831, and mathematical models show it to be so stable that it is thought to be a permanent feature of the atmosphere.

Jupiter has a very large and powerful magnetosphere. Eddy currents in the planet's metallic hydrogen core generate the magnetic field, which is 14 times as powerful as the Earth's, and fatal to any unshielded human. The magnetosphere of Jupiter – specifically the Jupiter-Io magnetic flux is a natural collector of Element 115, more commonly known as Foscolium. The solar wind carries particles of Foscolium out of the solar system, but over the centuries, large quantities have become trapped in the frozen Io regolith. Foscolium is the key to making interstellar travel possible.

The planet itself is home only to two large floating gas mines. Most workers live on Callisto and come in month-long shifts. The real excitement of Jupiter is found on the four Galilean moons – Callisto, Europa, Ganymede, and Io.

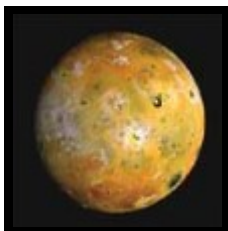


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Jupiter has four small inner moons: Metis, Adretea, Amalthea. and Thebe. These moons are responsible for the dust that forms Jupiter's ring system. Their composition is similar to outer main belt asteroids. All of these bodies are well within Jupiter's magnetosphere and exposed to extreme magnetic fields and radiation. These moons radiate more heat than they receive from the sun, due to magnetic-induced electric currents.

The Jovian ring system has four main components: a thick inner torus of particles known as the "halo ring"; a relatively bright, exceptionally thin "main ring"; and two wide, thick and faint outer "gossamer rings". The narrow and relatively thin main ring is the brightest part of Jupiter's ring system. Its outer edge is located at a radius of about 129,000 km and coincides with the orbit of Jupiter's smallest inner satellite, Adrastea. Its inner edge is not marked by any satellite and is located at about 122,500 km. The halo ring is the innermost and the vertically thickest Jovian ring. Its outer edge coincides with the inner boundary of the main ring approximately at the radius 122500 km. From this radius the ring becomes rapidly thicker towards Jupiter. The inner boundary of the halo is relatively sharp and located at the radius 100000 km, but some material is present further inward to approximately 92000 km.

Orbit 6 (Circum-Jove 5): Io Class 3 Colony



Orbit Radius	421 800km
Type	Rock
Density	0.35
Diameter	3643 km
Gravity	0.09 G

ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0
Composition	Sulfur dioxyde
Orbital period	1 days
Rotational period	0 hours

TEMPERATURE / SATELLITES

Polar	-143°C
equatorial	-73°C
Satellite	0

UNUSUAL FEATURES

Tidally locked.

WATER

Water	02
% water	0
% ice	2
% clouds	0

MINERAL RESOURCES

Metal ore	32
Radioactive ore	29
Precious metal	11
Raw crystal	5
Precious gems	9

Description:

The innermost of the four Galilean moons of Jupiter, Io is the most volcanically active body in the solar system. Infernally hot lava flows across a bitterly cold landscape, while billowing volcanic geysers spew plumes of sulphur to heights of up to 500 kilometres. This coupled with almost constant seismic activity and the vast electrical storms lasting weeks at a time which rage across the moon's angry surface make Io a very unwelcome place to visit.

Io's volcanoes continually expel an enormous amount of particles into space. These are swept up by Jupiter's magnetic field, where they become ionized and form a doughnut-shaped track around Io's orbit called the Io Plasma Torus. For spacecraft attempting to enter/leave Io orbit, these ionized particles can create seriously hazardous conditions, and have been responsible for a score of accidents involving crew fatalities. Despite the advances in radiation shielding that has made the colonisation of the Circum-Jove system possible, when the ion and radiation storms caused by the Io Plasma Torus are at their worst, getting on or off Io is nigh on impossible.

Not all of Io is dominated by volcanoes. The most common terrain is open, flat frost-covered plains. It is in the Io regolith that the first Foscolium deposits were discovered on the moon. Were it not for the sizeable deposits this most important of elements, it is doubtful anyone would ever come to this hellish place. Io has a thin atmosphere composed of sulphur dioxide and other gases. Unlike the other Galilean satellites, Io has little or no water.

The Io regolith is the primary source in the Sol system for Foscolium. Foscolium is a vital fuel source used to power interstellar drives. As well as the large scale corporate Foscolium mining operations, there are numerous small mining outposts scattered across the surface of Io, mining the metal ores that are ejected from the moon's many volcanoes. Life

is hard on Io, but the pay is generally good. Most of the Io miners have families and homes on Europa and Ganymede. The population is approximately 10,000.

Orbit 6 (Circum-Jove 6): Europa Class 3 Colony



Orbit Radius	671 100km
Type	Glacier
Density	3.01
Diameter	3138 km
Gravity	0.135 G

ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0.2
Composition	Ice particles, traces elements
Orbital period	3 days
Rotational period	3 hours

TEMPERATURE / SATELLITES

Polar	-180°C
equatorial	-50°C
Satellite	0

UNUSUAL FEATURES

WATER

Water	Glaciers
% water	0
% ice	60
% clouds	0

MINERAL RESOURCES

Metal ore	12
Radioactive ore	2
Precious metal	0
Raw crystal	8
Precious gems	7

Description:

Slightly smaller than the Earth's Moon, Europa is the second of the Galilean moons. Europa is lightly cratered, with only three large impact sites. The surface has so few craters, as it is extremely tectonically active and thus the crust is geologically young. The most striking surface features are the lineae, a series of dark streaks crisscrossing the entire moon. Its bright surface consists of a 9 to 16 km thick cross of water ice, scored by ridges and lines. It resembles sea ice on Earth which is not surprising.

Beneath the surface ice of Europa there is a layer of liquid saltwater, as much as 50 km deep in some places, kept liquid by tidally generated heat created by its orbit around Jupiter. In fact, it contains more water than all the oceans on Earth! Microscopic life was discovered to be living there, which spurred a race to Jupiter. Although originally thought to be entirely alien in origin, it was soon discovered that these European organisms were descended from Earth-based microorganisms, breaking away genetically some half billion years ago. The current theory is that the European microorganisms hitched a ride on a meteorite or other rocky body.

Because of this abundance of liquid water, Europa became the first of the outer planets to be colonised from Earth. Today it supports a population of 1.4 million, most of whom live in hanging cities just under the kilometre-thick crustal ice, at the top of the subterranean ocean. The 'Hanging Cities of Europa' have become a popular tourist destination for visitors from the inner planets.

In the black world-ocean which lies below Europa's icy crust lie the ruins of a cyclopean city of alien architecture. The architecture is similar to ruins found below the oceans of Earth, and only the Deep Ones themselves know if this is a different city, or if this actually part of sunken R'lyeh extending into the oceans of Europa through some unfathomable extra-dimensional anomaly. What is known is that in ancient mausoleums, a number of Cthulhu's kin lie sleeping here.

Two factions from Earth know of the existence of this city. They are the Seaborne Foundation and the super-black branch of Military Sciences Division (MiliSci) known as the Black Chamber. The Black Chamber has made some kind of deal with the Seaborne Foundation, for access to these ruins. Neither organisation trusts the other, and both are secretly working towards the downfall of the other.

The radiation level at the surface of Europa is equivalent to a dose of about 540 rem (Rad level/5) per day, an amount of radiation that would cause severe illness or death in human beings exposed for a single day.

Orbit 6 (Circum-Jove 7): Ganymede Class 3 Colony



Orbit Radius	1 070 400km
Type	Rock
Density	0.35
Diameter	5262 km
Gravity	0.14 G

ATMOSPHERICS / ORBIT

Atmosphere	Trace
Pressure	0
Composition	Traces of oxygen
Orbital period	7 days
Rotational period	0 hours

TEMPERATURE / SATELLITES

Polar	-164°C
equatorial	-164°C
Satellite	0

UNUSUAL FEATURES

Tidally locked.

WATER

Water	Ice sheets
% water	0
% ice	31
% clouds	0

MINERAL RESOURCES

Metal ore	11
Radioactive ore	4
Precious metal	1
Raw crystal	2
Precious gems	8

Description:

Ganymede is Jupiter's largest moon. It has a very thin oxygen atmosphere and is the only moon in the Sol system with a liquid iron core, somewhat similar to Earth's. This core produces a weak magnetosphere, which unfortunately provides little protection from Jupiter's intense radiation belt.

Ganymede is close enough to Jupiter that it experiences significant tidal stresses, which makes geothermal energy and liquid water available. Ganymede also possesses water ice, carbonaceous material, metals, and silicates. Fairly deep within Jupiter's gravity well, travel to and from Ganymede is relatively energy-intensive and therefore expensive.

The third largest of the Circum-Jove colonies, Ganymede has a population of approximately 50,000. Most of this number is located in the settlements on and below the vast Galileo Regio plains. Ganymede is often referred to as Nanotech Valley, the name a homage to Silicon Valley back on Earth. This is because the moon is a leading high tech hub with a large number of nanotech-engineers and venture capital backed technology start-ups based here. The Nanoforges and Manufactories of Ganymede are the lead suppliers of nanotechnology to Sol industry.

Orbit 6 (Circum-Jove 8): Callisto Class 3 Colony



Orbit Radius	1 882 700km
Type	Rock
Density	0.35
Diameter	4821 km
Gravity	0.14 G

ATMOSPHERICS / ORBIT

Atmosphere	Trace
Pressure	0
Composition	Traces of carbon dioxide
Orbital period	16 days
Rotational period	0 hours

WATER

Water	Ice sheets
% water	0
% ice	22
% clouds	0

TEMPERATURE / SATELLITES

Polar	-153°C
equatorial	-153°C
Satellite	0

UNUSUAL FEATURES

Tidally locked.

MINERAL RESOURCES

Metal ore	8
Radioactive ore	10
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Callisto is one of the most heavily cratered satellites in the solar system. In fact, impact craters and associated concentric rings are about the only features to be found; there are no large Callistoan mountains. Callisto's battered surface lies on top of an icy layer that is about 150 kilometres thick. Beneath the crust lies a salty ocean in excess of 10 kilometres deep. Callisto has a trace atmosphere composed of carbon dioxide. Its source is the slow sublimation of carbon dioxide ice from the satellite's icy crust.

Outside of Jupiter's radiation belt and also geologically very stable, Callisto was chosen as the location of the first landing by a manned mission to the moons of Jupiter. Even though the colony at Europa is far larger, the Valhalla Dry Dock orbiting the moon is still the only orbital facility capable of accommodating the giant Jovian refinery ships. The surface colony is built in and around the Asgard Crater, and between this, several outposts and the orbiting dry dock facilities, Callisto has a population of approximately 250,000.

Orbit 7: Saturn



Orbit Radius	10.1 au
Type	Gas Giant
Density	0.125
Diameter	120,530 km
Gravity	0.91 G

ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.38
Composition	Hydrogen/Helium/Methane
Orbital period	29.46 years
Rotational period	10 hrs 32 min

TEMPERATURE / SATELLITES

Polar	-189°C
equatorial	-139°C
Satellite	79

UNUSUAL FEATURES

Cloud cover.

WATER

Water	None
% water	0
% ice	0
% clouds	100

MINERAL RESOURCES

Metal ore	?
Radioactive ore	?
Precious metal	?
Raw crystal	?
Precious gems	?

Description:

Like Jupiter, Saturn is a gas giant, although it is less dense and its radiation belt is only a fraction as intense as Jupiter's. Saturn rotates quickly for its size and has turbulent internal weather with winds reaching 1,800 kph. Saturn's atmosphere is very cold on the outside but reaches a tremendous heat on the inside. This causes it to radiate out two and a half times the heat it receives from the sun.

Saturn's northern pole exhibits a mysterious and persisting hexagonal wave pattern, which is larger than the Earth. This wave pattern rotates once every 10 hours, 39 minutes and 24 seconds, the same cycle as the planet's radio emissions. This is assumed to match the rotation of Saturn's interior core. The hexagon does not vary in longitude, as do the other clouds.

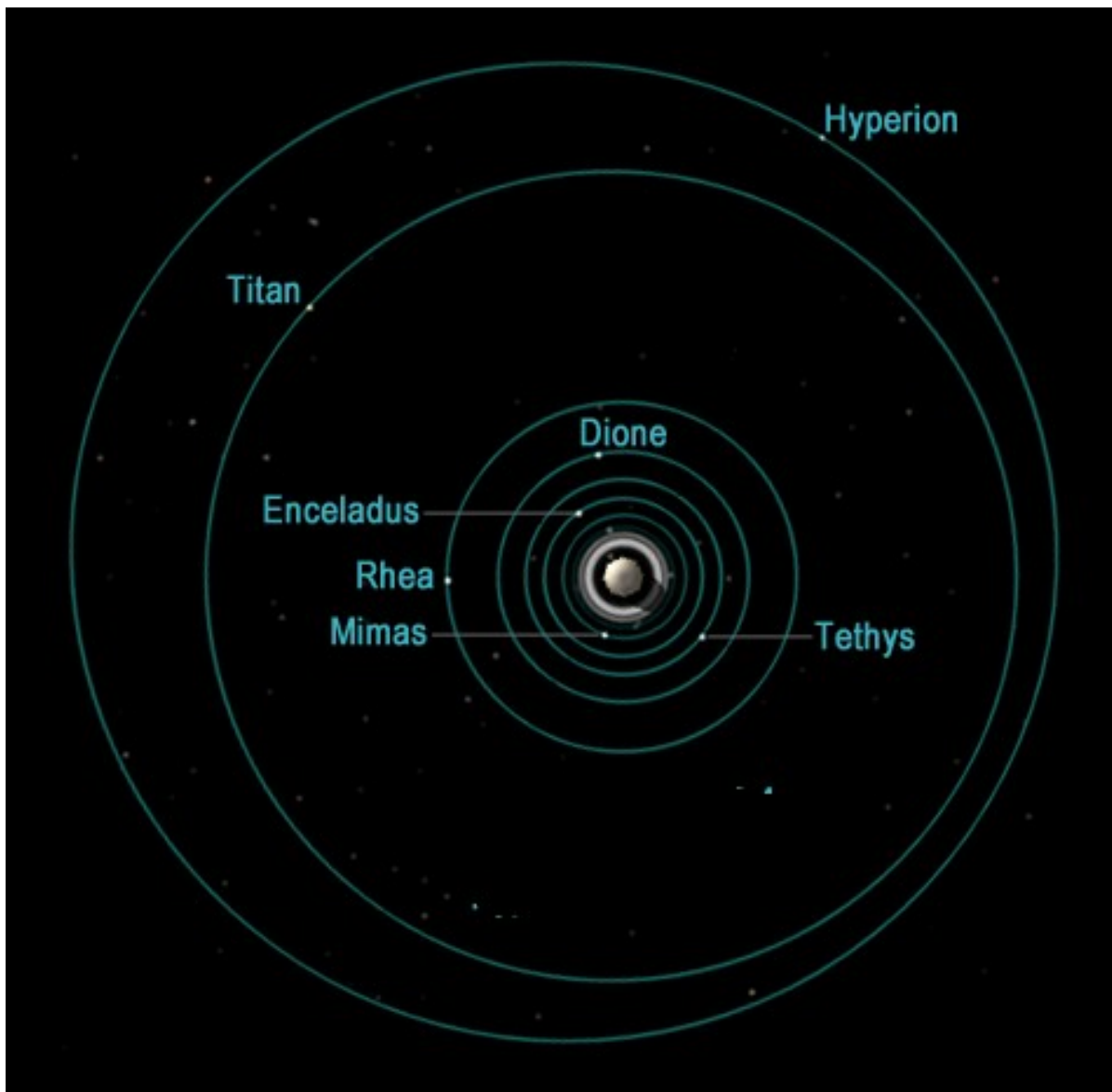
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Saturn is surrounded by a complex ring system made up of small rocks, icy particles and dust. This system consists of nine main rings and three discontinuous arcs. Over a hundred moons and moonlets are known to orbit the planet – more than any other planet in the system.

Out there, beyond the treacherous rim of the Asteroid Belt and the great orbit of Jupiter lays the heart of mankind's new frontier – Saturn. Her many rings highlight the moons that are home to a rising civilization. Opportunities abound here for the adventurous of heart and the ingenious of mind. Rapid growth has created a strong economy built on industry, manufacturing, mining, tourism, and perhaps the most important of Saturn's commodities – agriculture. It might seem ironic that the world in the solar system named after the Roman god of the harvest would actually deliver on the promise of her namesake. However, Saturn has evolved into what is called the breadbasket of the outer planets.

Ice harvesting has become an important industry among Saturn's moons, especially Enceladus with its giant plumes of sprayed ice shot majestically into space from massive geysers on its southern pole. Other moons like Rhea play host to huge manufacturing plants and ship yards that allow Saturn to produce biodomes, shuttles, transports, and other necessary components that sustain the colony. Saturnine colony structures and merchant vessels are not uncommon among the Outer Worlds.

Cassini Station is a space station located in low Saturn orbit. Constructed between 2176 and 2180, it serves as an orbital base for nuclear-powered winged SATVs, which dive into the atmosphere collect He-3 from the mining aerostats. Once a few hundred tons of gas are accumulated, a tanker docks with the station to transport the load out of Saturn's gravity well. Cassini Station is a cylindrical station about 250m long and 40m in diameter. The station is mostly operated by AIs, but also has a human crew of 50 people. It is owned by the Proxima Incorporated, but also serves as a base for scientific studies of Saturn. Its staff includes several researchers from various universities.



Orbit 7 (Circum-Saturnus 21): Rhea aka Saturn V, Class 3 Colony



Orbit Radius	527,108 km
Type	Rock, Ice-ball
Density	0.224
Diameter	1525 km
Gravity	0,027 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	4.51 days
Rotational period	4.51 days

TEMPERATURE / SATELLITES

Polar	-220°C
equatorial	-174°C
Satellite	0

UNUSUAL FEATURES

Tidally locked.

WATER

Water	None
% water	0
% ice	66
% clouds	0

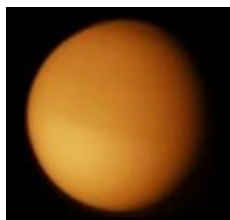
MINERAL RESOURCES

Metal ore	15
Radioactive ore	0
Precious metal	2
Raw crystal	0
Precious gems	0

Description:

Rhea is the second largest moon of Saturn and home to only a few hundred hardy engineers and pioneers, eking out a living manning the water harvesters and launch vehicles. The colony itself is mostly a set of surface docks connected to a network of habitable tunnels drilled into the ice. Trips between orbit and the surface are frequent and are aided by the low gravity. The population is mostly temporary and young, generally rotating in for a few years to make good money before rotating back home to make a real life.

Orbit 7 (Circum-Saturnus 22): Titan aka Saturn VI, Class 2 Colony



Orbit Radius	1,221,870 km
Type	Pre garden
Density	1.81
Diameter	5150 km
Gravity	0.14 G

ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.5
Composition	Oxygen/Nitrogen mix
Orbital period	15 days
Rotational period	10 hours

TEMPERATURE / SATELLITES

Polar	-148°C
equatorial	7°C
Satellite	0

WATER

Water	Seas
% water	18
% ice	22
% clouds	80

MINERAL RESOURCES

Metal ore	32
Radioactive ore	7
Precious metal	3

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UNUSUAL FEATURES

Cloud cover.

Raw crystal	1
Precious gems	19

Description:

Titan is the largest moon of Saturn. Although Titan is classified as a moon, it is larger than the planets Mercury and Pluto. It has a planet like atmosphere. When explorers first set foot on Titan, it was confirmed that it's air was predominantly made up of nitrogen with other hydrocarbon elements which gave Titan its orange hue. These hydrocarbon rich elements are the building blocks for amino acids necessary for the formation of life, similar to Earth before life began putting oxygen into the atmosphere.

In comparison to Mars, terraforming Titan was relatively easy. Originally a small mining colony, Titan's population increased to the current 4.7 million inhabitants once the terraforming began to take effect. The colonial population are predominantly American and Chinese descent, with a growing number of European and Japanese.

The moon possesses a harsh and bitterly cold climate, but atmospheric terraforming allows colonists to walk outside the colony domes with only the aid of cold weather clothing and compressor unit. Hydrocarbons continue to react with the Sun's ultraviolet rays, producing the characteristic orange smog in the upper atmosphere.

Christiaan Huygens City is an important and thriving colony base, and its only economic rival in the outer Sol colonies is Europa in the Circum-Jove colonies. It is the headquarters of the mining conglomerate TCC (the Titan Corporate Collective). The Titan Corporate Collective was founded when the three original companies operating on Titan and among the moons of Saturn merged in 2148, the thirtieth anniversary of Titan's colonisation. Though other corporations have since moved into business on Titan, TCC still have a monopoly on mining activities in the Circum-Saturnus system.

Titan is the UEAf 'hot dock' for the Sol Defence Fleet vessels assigned to the Deep Space Garrison. While Mars and Luna have larger military installations, Titan is better positioned to let starships intercept any unauthorised space vessel(s) inbound to the Home Worlds. UEF law dictates that no spacecraft may activate their F-Drive engines any close to Sol than the orbit of Saturn. Titan Sound spaceport is always host to at least a dozen UEAf fleet vessels, and has sizable aerospace and marine assets at its disposal.

The spaceport is actually located a few kilometers downstream from Huygens, on Labrys, a nine-kilometer-long island in the Minoan Sea. Minos has a permanent population of 4.000, working in the port and the surrounding warehouse and entertainment district.

Port Minos caters to a regular influx of off-duty soldiers and technicians from Rhea and Cassini Station, as well as daily visits by workers from the chemical refineries, farms, and factories of Huygens proper. The livable areas of the port are actually a collection of towers rather than domes, connected by tube bridges and flying ledges.

Reputed to be the "sin City of the Deep Beyond," Minos is famous for its casinos, and its red light district, with gambling parlors, love-doll rental dealerships, nanodrug stores, capsule motels, pawn shops, bioroid brothels, and slinky vendors. As is natural on a moon that boasts entire seas of ethane and whose leading occupation is "chemical engineer," the bars are very well stocked and there are microbreweries on every street corner.

Orbit 7 (Circum-Saturnus 23): Hyperion aka Saturn VII, Outpost



Orbit Radius	1,481,009 km
Type	Ice-ball
Density	0.108
Diameter	360x205x165 km
Gravity	0.02 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	1.5
Composition	None
Orbital period	21.3 days
Rotational period	~13 days (chaotic)

TEMPERATURE / SATELLITES

Polar	-180°C
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WATER

Water	None
% water	0
% ice	72
% clouds	0

MINERAL RESOURCES

Metal ore	2
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NEW HORIZON, core rules 6.2 – volume 2

equatorial -158°C

Satellite 0

UNUSUAL FEATURES

Chaotic rotation.

Radioactive ore 0

Precious metal 0

Raw crystal 0

Precious gems 0

Description:

Hyperion is an irregular moon, the largest non-spherical body in the solar system. Hyperion's eccentric orbit around Saturn, its irregular shape, and an orbital resonance with Titan combine to give the satellite a chaotic, tumbling rotation unique in the solar system. The average distance between Hyperion and Saturn is 0.0097 AU.

Hyperion has variable microgravity, an escape velocity from 45 to 99 m/s and no atmosphere. Due to its tumbling rotation and ever-changing horizon, a -15% penalty applies to all Piloting rolls to land on Hyperion, and any Free Fall skill rolls, throwing, jumping, or ranged combat fire while on or near its surface.

The surface of Hyperion is old and heavily cratered – the largest crater is 120km across and 9km deep. Features include numerous winding chasms, caves, and fractures. The moon suffered a major collision a few billion years ago that blasted much of it away. What's left is battered ice and rock.

Hyperion was first visited by humans in 2175, when Proxima Incorporated established a temporary base-camp to study the moon's unusual geology. In the period 2184-2185, the base was occupied and expanded by 64 Gypsy Angels who had been working at Cassini Station before they were dismissed as a result of a labor dispute with Titan Consortium. These so-called "pirates of Hyperion" raided a couple of He-3 shipments, selling some to homesteader communities at cut-rate price. They were in the process of converting the captured robot freighters when UEF, military forces arrived. Some of the pirates escaped; others were captured or killed covering their retreat.

Today, Hyperion is used by the UEF as a hostile-environment training area and free-fire range for the military, as well as a testing area for war machines. The old Proxima Incorporated base is not permanently inhabited, although a single SAI is stationed there to act as caretaker. When major exercises or test runs are scheduled, its population can swell to 200-300 people.

A pair of Predator AKVs (and sometimes a larger force, if maneuvers are ongoing) usually keep an eye on the moon, and will enforce a quarantine when the testing range is actually in use. Visitors can land elsewhere; there's no spaceport, although possible to hide oneself and navel stealthily by taking advantage of Hyperion's twisted geology.

Some areas of Hyperion are marked with paint, radio beacons, or v-tags saving things like "Warning: this area may contain unexploded munitions or other hazards." There's occasional wreckage from various encounters in some deep chasms, although UEF recovery teams do make an effort to clear up and retrieve most debris. There are also unsubstantiated rumors of hidden caches of He-3 left behind by the Gypsy Angels.

Orbit 7 (Circum-Saturnus 24): Iapetus aka Saturn VIII, Outpost



Orbit Radius 3,560,820 km

Type Rock, Ice-ball

Density 0.197

Diameter 1469 km

Gravity 0.025 G

ATMOSPHERICS / ORBIT

Atmosphere Vacuum

Pressure 0

Composition None

Orbital period 79.3 days

Rotational period 0 hours

TEMPERATURE / SATELLITES

Polar -183°C

equatorial -143°C

WATER

Water none

% water 0

% ice 80

% clouds 0

MINERAL RESOURCES

Metal ore 0

Radioactive ore 0

NEW HORIZON, core rules 6.2 – volume 2

Satellite	0
UNUSUAL FEATURES	
Tidally locked.	

Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Iapetus is almost entirely made up of water ice. However, the contrast between the surfaces of Iapetus' two hemispheres is dramatic. The trailing hemisphere is covered with bright, dirty ice, much like Enceladus, with many large craters. The surface of the leading hemisphere is coated with a dark carbonaceous material resembling tar.

In 2132, a probe of Cenargo Corporation landed on Iapetus, and positively identified the coating as amorphous carbon (similar to soot) and various organic substances, including poisonous cyano-compounds such as frozen hydrogen cyanide polymers. The composition of this material was identical to Titanian tholin. It is believed that in the distant past, a massive meteor struck Titan (possibly forming the Minoan Sea) and blasted a Cloud of debris into orbit. Shortly afterward, Iapetus passed through the cloud, resulting in the dark stain on its leading surface.

In 2185, Iapetus witnessed the last act of the tale of the Pirates of Hyperion. One of two fleeing Gypsy Angels Collective vessels was on course to Iapetus, apparently planning to use the moon as part of a gravitational slingshot maneuver. It was 12,000 km from Iapetus when it was caught by a pursuing AKV and destroyed. The AKV was controlled by a SAI, and this particular action represented (as far as anyone knows) the first time that a sapient artificial intelligence killed human beings. Ten years later, in 2195, a Gypsy Angel spacecraft landed on Iapetus. The crew proceeded to erect an ironic memorial: a black basalt slab housing a solar-powered radio beacon.

Orbit 7 (Circum-Saturnus 27): Phoebe aka Saturn IX, Outpost



Orbit Radius	12,960,000 km
Type	Rock, Ice-ball
Density	0.30
Diameter	218 x 217 x 204 km
Gravity	0,04 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	550 days
Rotational period	9hrs 16 min

TEMPERATURE / SATELLITES

Polar	-195°C
equatorial	-161°C
Satellite	0
UNUSUAL FEATURES	

WATER

Water	None
% water	0
% ice	50
% clouds	0

MINERAL RESOURCES

Metal ore	5
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Phoebe was one of the moons of Saturn. A small ice moon with an irregular orbit, it was thought to have originally come from the Kuiper belt and captured by Saturn's gravity.

The first manned landing on Phoebe was made in order to be surveyed for ice mining (much like the rings of Saturn). When core samples from the moon were investigated, however, silicate samples were found, and the UEF approached Weyland-Yutani corporation as a cosponsor of a long-term research facility.

After Weyland-Yutani discovered the alien agent they dubbed the protomolecule (colloquially known as the "Phoebe bug" due to its origin) encased in Phoebe, they theorized that Phoebe was not a naturally formed planetesimal, but created as a weapon by extra-terrestrials 2.3 billion years in the past, and launched at a trajectory towards the Earth. It was, however, captured by Saturn's gravity, where it settled as a satellite.

The labs at Phoebe Station were a joint scientific venture between the UEF and Weyland-Yutani researchers. Unfortunately, something went wrong and the researchers were exposed to the protomolecule. After the protomolecule killed the staff, Weyland-Yutani burned the bodies, purged the hard drives, and abandoned the station. Access to phoebe is now quarantined by the UEAF.

Orbit 8: Uranus



Orbit Radius	20.1 au
Type	Ice Giant
Density	0.24
Diameter	102,354 km
Gravity	0.89 G

ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	0.99
Composition	Hydrogen/Helium/Methane
Orbital period	84.01 years
Rotational period	17 hrs 54 min

TEMPERATURE / SATELLITES

Polar	-197°C
equatorial	-193°C
Satellite	27

UNUSUAL FEATURES

Cloud cover.

WATER

Water	None
% water	0
% ice	15
% clouds	100

MINERAL RESOURCES

Metal ore	?
Radioactive ore	?
Precious metal	?
Raw crystal	?
Precious gems	?

Description:

For years, the Uranus sector had been nothing more than a junction point for transports off to the lucrative diamond mines of Neptune or the vast expanse of the Kuiper Belt beyond. Even then, that was only when the orbital alignments worked out. That all changed when Proxima Incorporated founded the hydrogen mining facility from Veronica Station. The corporation obtained the rights to the moons surrounding Uranus and has offered them to independent prospectors to do with as they will.

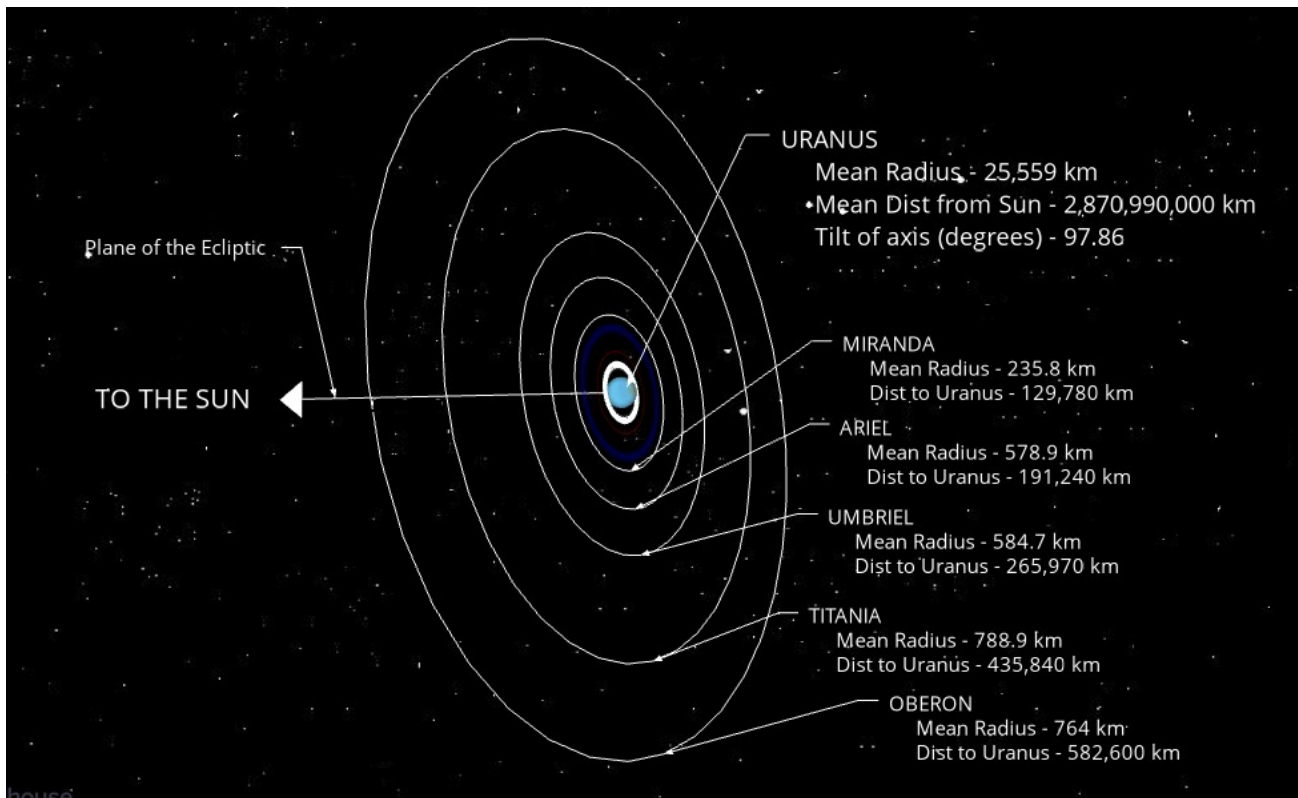
While Uranus is a giant planet, its interior is quite different from those of Jupiter and Saturn. Because it formed at a greater distance from the sun, more than 80% of its mass is ice and rock, and only about 17% is hydrogen. Uranus and its more distant sibling Neptune are sometimes referred to as "ice giants" rather than "gas giants."

The surface of the planet is not actually a surface at all, but a mix of water, ammonia, and methane in a thick liquid form. Despite its large size, the gravitational forces of Uranus are actually less than that of Earth, so it would be possible to land on its surface if it was solid.

Given that Uranus has no solid surface, the only colony for Uranus proper is Veronica Station – the mining facility run by Proxima to extract molecular hydrogen from the atmosphere. The space station is a patchwork of various components and sections from a number of failed attempts to set a mining rig in the orbit of Uranus.

Veronica Station sits in very low orbit of Uranus and, because of this, the facility has the added advantage of a natural gravity very near Earth normal. There are 8000 people on board Veronica Station, most of which who are employed directly or indirectly by Proxima.

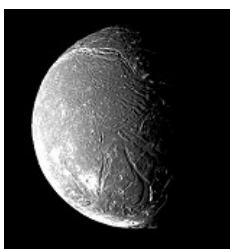
The strangest feature of Uranus is its unusual rotation. Instead of being roughly perpendicular to the plane of the ecliptic, like most planets, it is parallel to it. This means that during certain parts of the year the planets polar region receive more energy from the sun than its equator. As a result. Uranus has the most extreme seasons of any planet in the solar system. For example, during the northern summer, most of the northern hemisphere gets 20 years of sunlight, while the south receives 20 years of darkness. In spring and fall, sunrises and sunsets are normal. Despite this, temperatures at the equator are not much different than that at the poles, due to internal heat transfer.



Uranus has 27 moons. Uranus's moons are divided into three groups: thirteen inner moons, five major moons, and nine irregular moons. The inner and major moons all have prograde orbits, while orbits of the irregulars are mostly retrograde. The inner moons are small dark bodies. The five major moons are ellipsoidal and four of them show signs of internally driven processes such as canyon formation and volcanism on their surfaces. The largest of these five, Titania, is 1578 km in diameter and the eighth-largest moon in the Solar System, about one-twentieth the mass of the Earth's Moon.

The moons of Uranus have all been set up as mining and prospecting regions, where independent contractors obtain deeds for mining rights from Proxima. Law is officially maintained by the internal security supplied by Proxima Incorporated. The reality, however, is that the local prospectors will deal with suspected criminals internally. In fact, the region has the lowest reported theft rate of anywhere in the solar system, but that only means that little crime is reported. Being much like the gold rush towns of the old west on Earth, law is very often handled as a personal matter between prospectors.

Orbit 8 (Circum-Uranus 15): Ariel aka Uranus I, Outpost



Orbit Radius	190,900 km
Type	Rock, Ice-ball
Density	0.30
Diameter	1155 km
Gravity	0,027 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	2.5 days
Rotational period	0 hours

TEMPERATURE / SATELLITES

WATER

Water	None
% water	0
% ice	50
% clouds	0

MINERAL RESOURCES

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Polar	-203°C
equatorial	-193°C
Satellite	0
UNUSUAL FEATURES	
Tidally locked.	

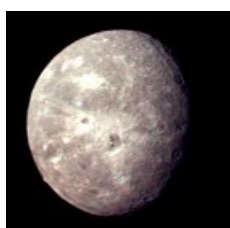
Metal ore	10
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Less than 1,200 kilometers in diameter, Ariel is a small moon that is half rock and half ice. The moon is most noted for its cratered surface and the long, smooth rift valleys that were likely carved out by flowing liquid, most likely ammonia, methane, or carbon monoxide. The moon has little strategic value within the Uranian system, but it is rich in volatiles and the tidal heating it endures makes them relatively easy to extract.

It is rumored that MiliSci is using the facilities as a harsh prison for captives or internal dissenters, for researching on artifacts from Dead Zones, or for developing or refining new technologies.

Orbit 8 (Circum-Uranus 18): Oberon aka Uranus IV, Class 3 Colony



Orbit Radius	583,520 km
Type	Rock, Ice-ball
Density	0.30
Diameter	1523 km
Gravity	0,035 G

ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	13.5 days
Rotational period	0 hours

TEMPERATURE / SATELLITES

Polar	-203°C
equatorial	-193°C
Satellite	0
UNUSUAL FEATURES	
Tidally locked.	

WATER

Water	None
% water	0
% ice	50
% clouds	0

MINERAL RESOURCES

Metal ore	10
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

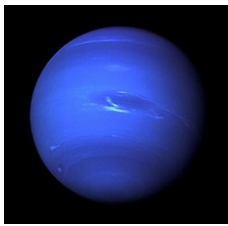
Description:

There's more to the tenth largest moon in the solar system, however. One thing that makes Oberon unique is its distant orbit. Swinging around Uranus at a radius of well over a half-million kilometers, it's the big planet's most distant moon. Oberon's placement in the Uranian system leads to a couple of implications.

First, Oberon is the only moon that isn't fully cloaked by the Uranian magnetosphere. Due to the odd shape of the planet's magnetic field, Oberon actually dips in and out of the magnetosphere during its orbit. As a consequence, it is the single best place to study variations in field strength and observe how the wildly changing magnetic flux affects the moon. A small scientific base of a few hundred souls built in the equatorial crater Lear does just this, garnering raw scientific data that can be gathered nowhere else in the solar system.

The second implication of Oberon's position is that it is the easiest moon to reach by ship — large, well away from the rings, at least partially free of the twisting madness of the planet's magnetic field. This reality has made Oberon the primary stopover for ships inserting into the Uranian system.

Orbit 9: Neptune



Orbit Radius	30.33 au
Type	Ice Giant
Density	0.29
Diameter	99,134 km
Gravity	1.14 G

ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0
Composition	Hydrogen/Helium
Orbital period	164.79 years
Rotational period	16 hrs 6 min

TEMPERATURE / SATELLITES

Polar	-211°C
equatorial	-200°C
Satellite	14

UNUSUAL FEATURES

WATER

Water	Ice sheets
% water	0
% ice	12
% clouds	0

MINERAL RESOURCES

Metal ore	?
Radioactive ore	?
Precious metal	?
Raw crystal	?
Precious gems	?

Description:

Neptune, the last planet of our solar system, so far into space that it is thirty times the distance of the Earth to the burning Sun. Wind is a near constant on Neptune – the average daily winds range from 60 kmph to nearly the speed of sound. Unsurprisingly, the only colony on Neptune's surface is underground – or under the thick ice layer, which has baffled scientists. Beyond it lies only the Kuiper Belt, a place filled with only dwarf planets and miscellaneous chunks of rock. It's no wonder it is a frigid, inhospitable world, where only the greedy or desperate would dare set foot.

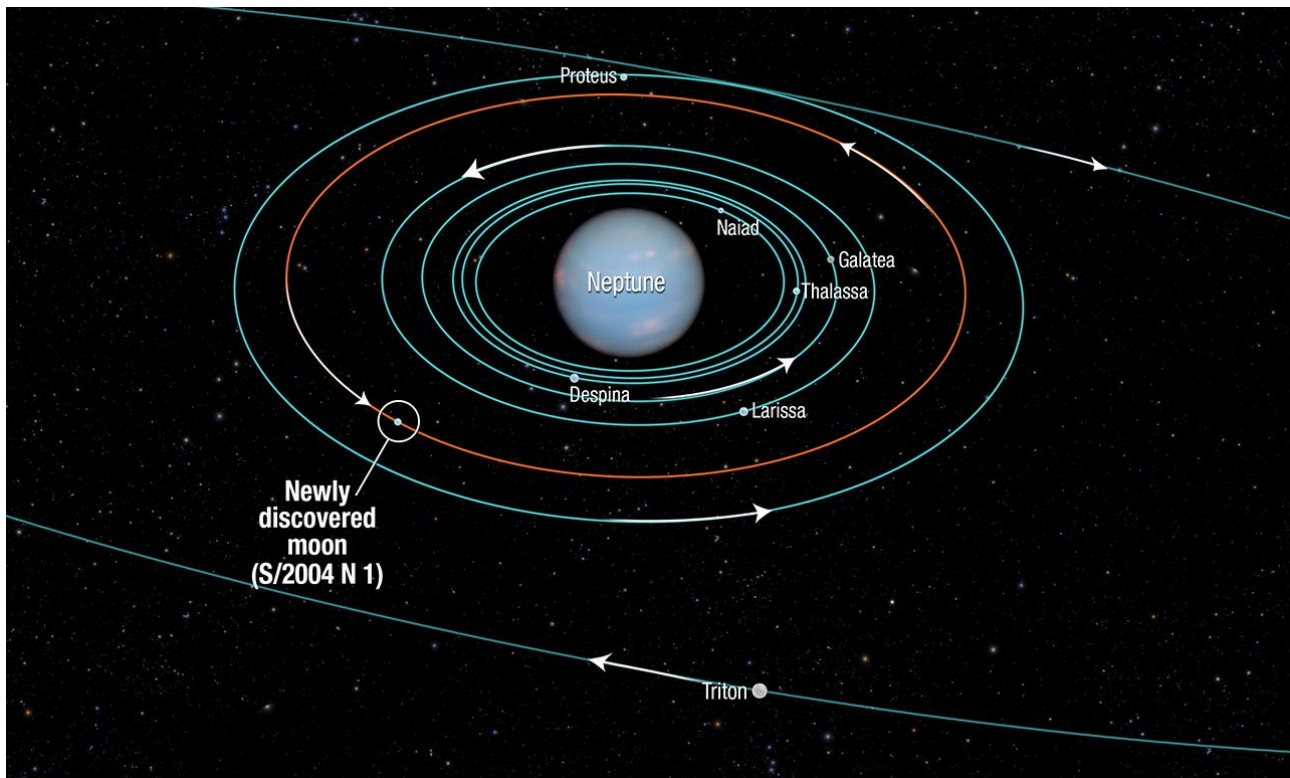
Getting down to the planet is opportunistic. Shuttles leave in between storms, when the wind speeds are at their least. People can wait weeks on Triton station, hoping for a window that will ferry them safely to the surface. Even then, the storms of Neptune are extremely dynamic and journeys are always perilous.

While Neptune is considered to have thirteen satellites, most of them are small and insignificant. Triton is the only satellite that is spheroid and is large enough to comprise 99% of the mass of all Neptune's satellites. What is also significant about Triton is that it is locked in synchronous rotation with Neptune – it always hovers in the same place, over Salacia.

Salacia is the only colony on Neptune. It is powered entirely by geo-thermal taps, utilizing the extremely hot core of the planet. At first glance, it would seem amazing that anyone would want to spend the large amounts of money and incredible effort required to maintain a colony on Neptune. Posterity or curiosity hardly seem reasonable motivations. The answer is simple – Neptune produces diamonds, the most precious gem in the solar system. Salacia is a joint operation of the European Federation and Cheung Corporation – a firm with long roots in the diamond business and the fabulous wealth that goes with it.

Over the last few years, strange things have become commonplace on Neptune. Many people have started to have intense nightmares, some of which have induced homicidal fits in otherwise normal folks. Insomnia (or sleep aids) are an epidemic. People also have started to go missing from time to time, without any trace – some believe there's a conspiracy afoot. On top of all that, there are those who claim to have heard eerie distant sounds through the surface flurries, like the songs of whales. None of these facts are advertised by Cheung – it would be bad for business.

Neptune possesses five distinct rings. Three of the Neptunian rings are narrow, with widths of about 100 km or less. The Neptunian rings contain a large quantity of micrometer-sized dust: the dust fraction by cross-section area is between 20% and 70%. The innermost ring of Neptune is about 2,000 km wide and orbits 41,000 – 43,000 km from the planet. The next ring has an orbital radius of about 53,200 km, it is narrow, with a width of about 113 km. The small moon Despina, which orbits just inside of it at 52,526 km, play a role in the ring's confinement by acting as a shepherd. The particles in Neptune's rings are made from a mixture of ice with radiation-processed organics.



Orbit 9 (Circum-Neptunus 8): Triton aka Neptune I, Outpost



Orbit Radius	354,759 km
Type	Rock, Ice-ball
Density	0.37
Diameter	2705 km
Gravity	0,079 G

ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0
Composition	Nitrogen; methane traces
Orbital period	5 days 21 hrs
Rotational period	9.4 hours

TEMPERATURE / SATELLITES

Polar	-237°C
equatorial	-235°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice sheets
% water	0
% ice	25
% clouds	0

MINERAL RESOURCES

Metal ore	10
Radioactive ore	2
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Triton is a light-colored globe just over three-quarters the size of Luna. It orbits Neptune at an average distance of 0.0024 AU. The moon's orbit is unusual: it is very circular; but Triton circles Neptune in a direction opposite to the planet's rotation: this situation is unique among large moons. As a result, tidal interactions are causing Triton's orbit to slowly decay: millions of years in the future, it will either break up into a ring or collide with Neptune.

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Unlike Earth's moon, Triton has a tenuous atmosphere and a very active geology, with geysers that spew plumes of cryogenic matter into space. Its trace atmosphere is composed of nitrogen with a whiff of methane; it's effectively a vacuum from a human perspective, but is visible as a faint haze that extends up to 8 km high. Winds blow across the surface at speeds of 30-60 kph. The atmosphere is just thick enough to allow a degree of parachute airbraking for landing payloads. Specialized wind-blown "tumbleweed" aerobots were used during the early exploration.

Triton's temperature averages -237°C, making the moon one of the coldest places in the solar system. It is 75% rock and 25% water ice, making it denser than many icy moons. Its retrograde orbit and rocky composition suggest it is a captured Kuiper Belt Object similar to Pluto, rather than a moon that formed along with Neptune. For the first billion years after Triton was captured, it had considerably more water. Tidal heating melted its liquid surface, leaving it the more differentiated rocky body it is today.

Triton's surface is scarred by giant cracks and jagged peaks and fissures, some stretching for hundreds of kilometers. There are a few flat plains of ice several kilometers across, the result of material from geysers filling up ancient meteor craters. As with Europa, there are very few visible craters, as billions of years of volcanic action and shifting ice has obscured them.

Triton has an extreme axial tilt of 157°, which gives it noticeable seasons (lasting for decades), although the temperature rarely exceeds -235°C. The ground is covered by nitrogen frost mixed with traces of condensed methane and carbon dioxide and monoxide. There are occasional dark streaks produced by nitrogen deposits blasted out of cryo-volcanoes and carried in long patterns by the winds.

Triton's geysers spew liquid nitrogen, carbonaceous dust, ammonia, and methane compounds into space, sending plumes shooting up to 8 km above the moon's surface. This "cryo-volcanic" action is the result of variations in seasonal heating from the sun, which causes pressure buildups in volatiles beneath the moon's surface.

Orbit 10: Pluto Outpost



Orbit Radius	39.5 au
Type	Primordial
Density	1.85
Diameter	1200 km
Gravity	0.063 G

ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0.4
Composition	Nitrogen/Methane/carbon monoxide
Orbital period	90 560 days
Rotational period	153 hours

TEMPERATURE / SATELLITES

Polar	-240°C
equatorial	-219°C
Satellite	5

UNUSUAL FEATURES

surface composed of more than 98 percent nitrogen ice

WATER

Water	Ice caps
% water	0
% ice	20
% clouds	0

MINERAL RESOURCES

Metal ore	10
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Pluto is the farthest planet from the Sun and is not only smaller and much less massive than every other planet, but at less than 0.2 lunar masses it is also smaller and less massive than seven moons: Ganymede, Titan, Callisto, Io, Earth's Moon, Europa and Triton. Pluto's thin atmosphere comprises mainly of nitrogen and carbon monoxide, in equilibrium with solid nitrogen and carbon monoxide ices on the surface. The planet surface is crisscrossed with chasms, jagged spires of rock, and plains of frozen nitrogen ice with smaller amounts of (solid) methane, ethane and carbon monoxide.

The small dwarf planet has always been a bit of an enigma in the solar system. Its orbit sneaks in and out of the Kuiper belt and is tilted, running north and south of the ecliptic plane. There has never been a satisfactory explanation of this

oddity. Pluto is known as the Last Outpost Planet, as beyond this there is nothing but interstellar space. Pluto is the location of a UEAF deep-space orbital listening post on Cthulhu Macula. The outpost is staffed by 24 operators, half of them synthetics.

The innermost and largest moon, Charon, has a mean radius of 606 km. Charon and Pluto orbit each other every 6.4 days. The two objects are gravitationally locked to one another, so each keeps the same face towards the other. The average distance between Charon and Pluto is 19,570 kilometres.

Orbit 11: The Kuiper Belt



Past the distant planet of Neptune lies a thick band of rock, from 35 to 50 AU, dust and ice known as the Kuiper Belt. Many dismiss this region as nothing more than another asteroid field, but those people do not truly understand the scope of the belt. Despite being far less dense in most areas than the better known belt of rocks that sits between Mars and Jupiter, the Kuiper Belt dwarfs its inner system cousin in its sheer population of rocks and ice that slowly drift through it. For this reason, the Belt has become the new frontier of the solar system.

While many asteroids are composed primarily of rock and metal, most Kuiper belt objects are composed largely of frozen volatiles (termed "ices"), such as methane, ammonia and water.

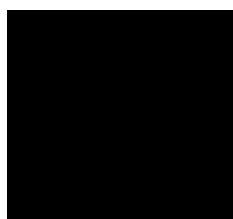
For those who are brave or, depending on who you ask, foolish enough to venture that far out, there lies a great potential to truly make a mark on the solar system. Many explorers have found massive deposits that have netted them finder's fees that allowed them to retire in style. Many more, however, have simply vanished never to be heard from again. While there is great promise in the Belt, there is also great danger.

So far out is the Kuiper Belt that even a small emergency can turn deadly. Unlike the inner system, there is usually no help to be found. Those who make their living in the belt are truly self-reliant – they have to be to survive. They are also freer to pursue their dreams than anywhere else in the solar system. The UEF has no say out here and even those corporations that have staked a claim out here, understand that they will never have any influence beyond the walls of their own stations.

In the last three decades, strange stories have begun to filter out of this region of space. Some are stories of things seen by independent explorers that cannot be explained or, for most, even believed. Ships have been found floating near iceroids and asteroids that are devoid of crew, with not even whispered clues of what happened to them. The most popular story revolves around a mine operated by Proxima Incorporated that has been closed down. While the official story is that an accident caused a major collapse of the mine, killing dozens of workers, those who survived the incident swear that the miners opened a cavern that had some sort of living monstrosities hibernating within.

Strangely similar stories and rumours also come from the Frontier. Some scouts tell tales of priceless artifacts found in ancient ruins on distant moons – ruins that predate humanity by millennia. Others talk of derelict spacecraft – and a race of giants that once stalked the stars in them. Still others whisper about hostile lifeforms that overrun entire worlds – terrifying parasitic creatures that are beyond our comprehension and wholly alien.

Orbit 12: Planet X, PBH-2080-001

	Orbit Radius	600 – 800 au
	Type	Primordial Black Hole
	Density	16 M _E (Earth Masses)
	Event Horizon	44,000 km around the equator
	Age	13.8 billion years

Description:

In 2080, the Tyson Observatory discovers two tidally-locked planets in close orbit beyond the Kuiper Belt. The larger of the two was named Erebus, after the primordial deity of darkness that existed before the Olympians, while the smaller planet was named Nyx, the sister of Erebus and goddess of night. The two planets are actually in orbit around a primordial black hole equal to 16.1 Earth Masses(M_E). Additionally, there were four observable moons orbiting Erebus and Nyx.

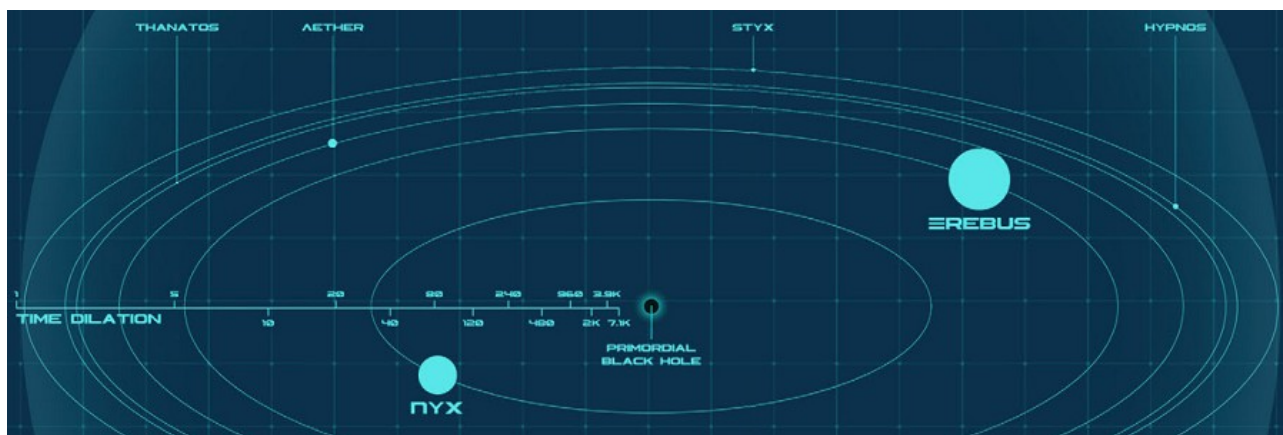
PBH-2080-001 is a rotating black hole and therefore gravitational time dilatation is particularly pronounced. This means that time runs more slowly the closer an observer is to the black hole. For a rotating black hole, the event horizon is not a perfect sphere, as it is in the case of a non-rotating black hole. Instead, it is oblate or spheroidal in shape due to the black hole's rotation. This means that the event horizon is somewhat flattened at the poles and extended around the

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equator. The event horizon represents a boundary or a point of no return around a black hole, beyond which nothing, not even light, can escape due to the immense gravitational pull of the black hole. Inside the event horizon lies the central singularity, which is a point of infinite density where the laws of physics, as we understand them, break down.

One of the unique consequences of a rotating black hole is frame-dragging, also known as the Lense-Thirring effect. It refers to the dragging of spacetime itself due to the black hole's rotation. As a result, objects close to the black hole are forced to rotate in the direction of the black hole's spin.

Orbit	Name	Distance (km x1000)	Orbital period (hours)	Diameter (km)	Density	gravity	time dilatation
I	Nyx	304	13.1	13,382	0.99	1.04	x32
II	Erebus	504	28.0	16,511	0.99	1.28	x6.4
III	Aether	577	34.4	3,659	0.61	0.18	x3.7
IV	Thanatos	623	38.5	948	0.42	0.03	x2.5
V	Hypnos	639	40,0	3,120	0.55	0.13	x1.8
VI	Styx	691	45,0	2,695	0.59	0.12	x1.1



Orbit 1 (PBH 1): Nyx (aka Yuggoth) Class 3 Colony



Orbit Radius	304,281 km
Type	Primordial
Density	0.98
Diameter	13,682 km
Gravity	1.15 G

ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.5
Composition	Nitrogen, methane, carbon dioxide, oxygen and sulfur
Orbital period	13.1 hours
Rotational period	148 hours

TEMPERATURE / SATELLITES

Polar	24°C
equatorial	65.5°C
Satellite	0

UNUSUAL FEATURES

Cloud cover	
-------------	--

WATER

Water	Seas
% water	40
% ice	0
% clouds	95

MINERAL RESOURCES

Metal ore	60
Radioactive ore	15
Precious metal	20
Raw crystal	8
Precious gems	2

Description:

Nyx is a dark, inhospitable landscape ravaged by hot, corrosive winds, with black seas, lakes, and rivers of a warm, oily substance that's a mixture of organic and other carbon compounds with various heavy metals. Rather than evaporating and falling as rain, the liquid slowly drains into the ground, where the planet's core superheats it. It then erupts from pillars of dark stone (similar to the deep sea smokers on Earth) before running back to the lakes and seas in viscous streams and rivers.

Nyx is extremely dark and is only reluctantly illuminated by her big brother Erebus. The deep red light that manages to reach the surface through the sulfurous clouds bath the landscape in a ghastly yellow-orange hue. The rock near the landing site is black and shiny with an oily sheen reminiscent of petroleum. A five-meter-wide black stream runs past the Orpheus, evidently originating from a nearby peak that reaches nearly 10 km into the sky. Along its western slope are dozens of chimney-like protrusions that appear to emit black cones of vapor that coat the surrounding rock with noxious effusion. Each chimney is more than 30 meters tall, tapering from 24 meters in diameter at the base to 6 meters at its peak. Several kilometers down the slope is a 200 meters high fall of dark oil that refracts the scant light, making it a deep purple color.

The jaundice rain is heavy, barely splashing as it hits the ground, and where it hits the obsidian stream, it releases a colorless mist. A constant growl of thunder and wind can be heard far overhead within the grim clouds, along with the occasional yellow flash.

Much of the nearby stone is pitted and eroded and has the texture of wax left in the summer sun. Every so often, the monotone coloration is broken by a shock of cobalt, violet, or electric blue crystals that seem to grow in knots where the stone is split or cracked.

Nyx hosts an alien biosphere that was nearly two billion years old by the time it reached the Sol system. The ecology of Nyx is almost entirely fungal-based, with some capable of locomotion and predation, while others can fly by generating buoyant gas to inflate membranous sacs on their bodies. The dark matter that infuses all life on Nyx is a challenge to human eyes and the nervous system, making it difficult to define colors and even shapes. Prolonged exposure can even lead to headaches as the eyes try to resolve what they're seeing.

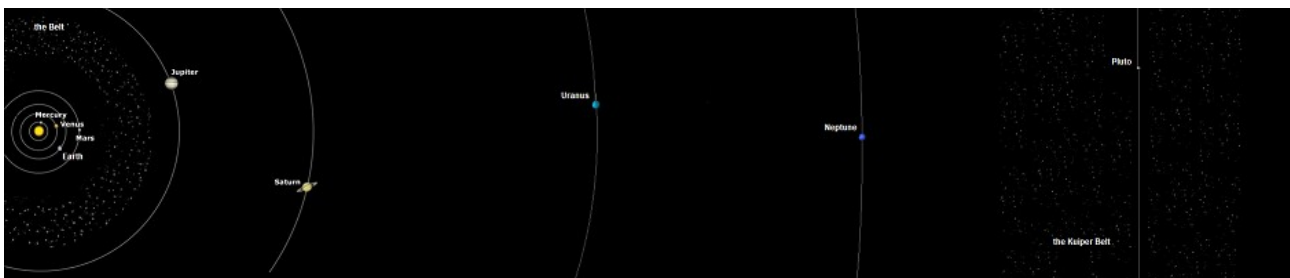
Nyx, or Yuggoth as they prefer to call it, serves as a forward operation base for the Greys. It is clear that Yuggoth is a remote and otherworldly place that serves as a launching point for the activities of the Greys on Earth. The Greys live in cities of terraced towers fashioned from an unearthly black stone. Windowless temples can be found on the higher peaks, and cyclopean basalt bridges span greasy, hydrocarbon rivers and deep canyons. At least one ancient city exists that pre-dates the Greys. It consists of green pyramids around a massive circular pit that appears bottomless. The Greys know little of this previous civilization.

The Greys are known for their highly advanced technology and are often depicted as conducting various scientific and medical experiments. They have experimented on humans for millennia. Abductees are taken to Yuggoth's underground laboratories, where they undergo extreme treatments. The lucky few are brought back to Earth for observation following less invasive experiments.

Orbit 13: The Oort cloud

The Oort Cloud is a region of space located at about 2,000 astronomical units (AU) from the Sun and extend to as far as 50,000 AU. It is the source of many comets that enter the inner solar system. The Oort Cloud is a vast, spherical cloud of icy objects, including comets and other small bodies. These objects in the Oort Cloud are in extremely cold and distant regions of the solar system, and they are believed to have been left over from the formation of the solar system. Occasionally, gravitational perturbations from nearby stars or other celestial events can send some of these objects into the inner solar system, where they become visible as comets. The Oort Cloud is incredibly diffuse and contains objects at vast distances from each other. Due to this extreme sparseness, it is challenging to directly observe or locate objects in the Oort Cloud.

Scale of the Solar System



Jupiter: 5 AU, Saturn: 10 AU, Uranus: 20 AU, Neptune: 30 AU, Pluto: 40 AU, Kuiper Belt: 35-50 AU, Nyx: 600 AU

Immigration/Emigration

Humanity never would have left the cradle of our solar system without the foresight of visionary entrepreneurs and businessmen. Under their stewardship, the Dirty Dozen Corporations introduced three things that ensured humanity's dominance over the stars – the capacity to travel at faster than light speeds, the introduction of the hypersleep chamber, and the ability to terraform whole worlds.

Colonial Indentured

Interplanetary and interstellar travel is still an expensive business. Most people who travel are either company employees, military personnel or government staff. There are no commercial passenger services out beyond the Core Systems. Travellers must negotiate their own ticket prices.

Individuals who lack the financial means and aspire to succeed in the vast interstellar frontier, sign up for colonial contract service and trade years of autonomy from the corporations for the opportunity to travel to the colonies.

Illegal immigration

Men and women who have been unable to pass the physical, mental and psychological tests imposed by the ICA in order to emigrate, then try another illegal route, which is not without danger.

These people have to pay for their passage with years of servitude to mafia groups or triads. Repayment takes many forms: free labor, criminal actions, prostitution, even organ or human trafficking in the worst cases. Any disobedience or refusal to do what is asked of them is usually punished by death or mutilation of varying severity.



Other Suns

by Wikipedia, Edward Simbalist & Phil McGregor

"The universe is a pretty big place. If it's just us, seems like an awful waste of space."

Carl Sagan – astrophysicist and astrobiologist

It is chemically possible that life could evolve which is based upon silicon or methane. The fact remains, however, that such life has a very low order of probability in comparison to the probability of hydrocarbon life. Hydrocarbon life is the most probable because hydrocarbons are pre-eminently capable of forming scores of thousands of compounds.











Habitable Planet

A "habitable" planet would be one possessing an environment and resources capable of encouraging and sustaining the evolution of life forms similar to (but not necessarily the same as) life on Terra. Such life forms would take shapes and exhibit adaptive characteristics appropriate to environmental demands. In order to state gaming conditions and systems in an SF game so that hard scientific data can be brought in the informed gamer to fill out the environment for role-play, the designers have decided not to fly in the face of science by presenting "fantastic" life forms living under conditions which we currently cannot conceive, let alone comprehend. We do make some limited provision for them, but caution is urged with regard to uncontrolled inventiveness on the part of enthusiastic gamers. In a scientifically governed environment, by definition predictable according to scientific laws and theories, creatures must be viable members of functioning ecosystems. We assume that Terra represents the optimum range of conditions under which most viable hydrocarbon life forms will develop.

Stellar Primaries

Star types range through a variety of spectral types using the codes O B A F G K M. These letters indicate in descending order the temperature of the stars.

The stars assumed by these rules to have the best chances of Terran habitable planets are of Type G, followed closely by Type K and F stars. Type M stars are somewhat less likely to be able to produce appropriate conditions but cannot be ruled out.

Type	Color	Surface Temperature
W	 blue	>35 000K
O	 blue	25 000 – 35 000K
B	 blue-white	10 000 – 25 000K
A	 white	7500 – 10 000K
F	 yellow-white	6000 – 7500K
G	 yellow	5000 – 6000K
K	 orange	3000 – 5000K
M	 red	2500 – 3500K
L	 dark red	1300 – 2500K
T	 brown	550 – 1300K

Size	Type
0	hypergiants
Ia	Brighter Supergiants
Ib	Weaker Supergiants
II	Bright Giants
III	Normal Giants
IV	Subgiants
V	Main Sequence Stars
VI	Sub Dwarfs
VII	White Dwarfs

The spectral type for stars is usually further specified by a decimal classification (using the digits 0 to 9). Thus a type F1 star is one-tenth of the way between F and G. All stars are treated this way with the exception of dwarf stars, which do not have decimal classification.

Human presence in a star system will be established on the most lucrative planet, not the most Earth-like. It might have poisonous air and seas of sulfuric acid, but if there's palladium or iridium to mine, then that's where the colony will go. This colonized world will sometimes be referred to as the main world, to differentiate it from all of the uninhabited planets and moons in the rest of the star system.

Each main world requires the GM to randomly create its Size, Atmosphere, Temperature and Geosphere. One random Planetary Feature can then be created (to create an initial impression of the world's surface) before moving on to the Colony Size, Colony Mission, Factions at work and any Orbital Components.

Planetary Size & Gravity

The surface gravitational acceleration of the various planets is always stated in terms of 1 Terran G (9.81 m/s²). In order to find the mass/weight of a being or object in a gravity field, simply multiply its Terran weight/mass times the gravity factor. Gravity field strength is stated in terms of Terran G.

The following table can be used to find the gravity fields of various planets.

Surface Gravity Table

Planetary Diameter (km)	Very Low (0.27)	Low (0.45)	Density Moderate (0.82)	Dense (1.00)	Very Dense (1.30)	Examples
1000	0.02	0.03	0.06	0.08	0.10	Ceres
2000	0.04	0.07	0.12	0.17	0.20	Iapetus
3000	0.06	0.10	0.19	0.25	0.30	
4000	0.08	0.14	0.25	0.34	0.40	Luna, Europe
5000	0.10	0.17	0.31	0.42	0.50	
6000	0.12	0.21	0.37	0.50	0.60	
7000	0.14	0.24	0.40	0.58	0.70	Mars
8000	0.17	0.28	0.51	0.68	0.80	
9000	0.19	0.31	0.56	0.72	0.90	
10,000	0.21	0.35	0.63	0.76	1.00	
11,000	0.23	0.38	0.69	0.84	1.10	
12,000	0.25	0.42	0.75	0.92	1.20	
13,000	0.27	0.45	0.82	1.00	1.30	Earth, Venus
15,000	0.31	0.52	0.94	1.15	1.50	
20,000	0.40	0.70	1.28	1.50	2.00	Super Earth
25,000	0.50	0.90	1.50	1.90	2.50	
30,000	0.60	1.00	1.90	2.30	3.00	

For comparison, Terra = 13,000 km diameter (dense) with 1.00 G.

Planetary densities tend to vary between 0.75 (0.75 mass of an equal volume of water to 7.00). Density represents the relative amount of mass in a given volume. For example, the average density of Earth is approximately 5.513 kg/m³.

Planets are divided into three groups:

1. **Low Density Planets:** Planets composed of materials of low specific gravity. Gas Giants like Jupiter and Saturn fall into this category. "Heavy" metals will be, relative to the total mass present, very rare indeed. Porous rock and "ice" would seem to be the major constituents of the "solid" planet, while the atmosphere would tend to be a significant proportion of the total mass.
Examples: Jupiter, Neptune, Saturn, Uranus.
2. **Moderate Density Planets:** Planets composed of rock with low specific gravity. Some heavy metals will be present, but not in truly significant quantities. Light metals might be abundant, however.
Examples: Mars.
3. **High Density Planets:** Planets composed of materials of high specific gravity, with considerable heavy metals present. Such planets might be termed "Terran" planets, for Terra is quite typical of this class.

Gravity Field Calculation

The formula to calculate the gravity field on a planet is given by Newton's law of universal gravitation. The formula is:

$$g = G \cdot M / R^2 = 2 / 3 \cdot \pi \cdot G \cdot \rho \cdot D$$

where:

- g is the gravitational field strength or acceleration due to gravity (m/s^2).
- G is the gravitational constant ($6.674 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$).
- M is the mass of the planet (kg).
- R is the distance from the center of the planet to the point where gravity is being measured (m).
- ρ is the density of the planet (kg/m^3).
- D is the diameter of the planet (m).

This formula states that the gravitational field strength is directly proportional to the mass of the planet and inversely proportional to the square of the distance from the center of the planet.

Keep in mind that this formula assumes a spherically symmetric distribution of mass, which is a reasonable approximation for many planets. If dealing with a non-uniform mass distribution, the calculation becomes more complex.

For a quick calculation, using the planet's diameter (in km) and the Earth's density (ρ_e) as units, use the following formula:

$$g_e = 7.885 \cdot 10^{-5} \cdot \rho_e \cdot D$$

The result will then be expressed in Terran G (g_e).

Orbital Period

The orbital period is the time a given astronomical object takes to complete one orbit around another object, and applies in astronomy usually to planets or asteroids orbiting the Sun, moons orbiting planets, exoplanets orbiting other stars, or binary stars.

The following table can be used to find the period in days of various planets orbiting a given star.

Orbital Period Table

Dist. (AU)	Solar mass									
	0.01	0.08	0.4	0.8	1.0	1.5	3.0	18	40	80
♂ 0.4	924	327	146	103	92	75	53	22	15	10
♀ 0.7	2139	756	338	239	214	175	123	50	34	24
♂ 1.0	3652	1291	577	408	365	298	211	86	58	41
♂ 1.5	6709	2372	1061	750	671	548	387	158	106	75
2.0	10324	3650	1632	1154	1032	843	596	243	163	115
3.0	18966	6705	2999	2120	1897	1549	1095	447	300	212
4.0	29200	10324	4617	3265	2920	2384	1686	688	462	326
♀ 5.0	40831	14436	6456	4565	4083	3334	2357	962	646	456
6.0	53644	18966	8482	5998	5364	4380	3097	1264	848	600
8.0	82590	29200	13059	9234	8259	6743	4768	1947	1306	923
♂ 10.0	115486	40831	18260	12912	11549	9429	6668	2722	1826	1291
12.0	151728	53644	23990	16964	15173	12389	8760	3576	2399	1696
15.0	212162	75011	33546	23720	21216	17323	12249	5001	3355	2372
18.0	278741	98550	44073	31164	27874	22759	16093	6570	4407	3116
♂ 20.0	326644	115486	51647	36520	32664	26670	18859	7699	5165	3652
22.0	376640	133162	59552	42110	37664	30753	21745	8877	5955	4211
25.0	456499	161397	72179	51038	45650	37273	26356	10760	7218	5104
♂ 30.0	600084	212162	94882	67091	60008	48997	34646	14144	9488	6709
35.0	756192	267354	119565	84545	75619	61743	43659	17824	11956	8454
♀ 40.0	923890	326644	146080	103294	92389	75435	53341	21776	14608	10329

For comparison, Terra = 1 A.U. with 1 solar mass (type G).

Orbital Period Calculation

The formula to calculate the orbital period (T) of a planet or satellite in a circular orbit around a central body is given by Kepler's Third Law. The formula is:

$$T = 2\pi \cdot \sqrt{a^3 / (G \cdot M)}$$

where:

- T is the orbital period (s).
- π is a mathematical constant (approximately 3.14159).
- a is the semi-major axis of the orbit (average distance in m from the center of mass).
- G is the gravitational constant ($6.674 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$).
- M is the mass in kg of the central body (e.g., a planet, star).

This formula applies when the mass of the orbiting object is much smaller than the mass of the central body, and the orbit is nearly circular. If the orbit is highly elliptical, a more complex formula is used.

For a quick calculation, using the solar Mass (M_s) and AU as units, use the following formula:

$$T = 365 \cdot \sqrt{a^3 / M_s}$$

The result will then be expressed in days.



Planetary Conditions

The overall conditions encountered on a planet will depend upon many factors. This section deals with the broad effects of the orbital position of the planet in or outside the stellar Ecosphere, the eccentricity of the planet's orbit around its sun, the period of planetary rotation on its axis (length of "day"), and the inclination of the planet's axis to the plane of the orbit. Such factors have significant implications for the climate:

Planetary Type	Description
1	The planet is at a favourable position in the Ecosphere. Axial tilt is between 10° and 30°, orbital eccentricity is less than 0.2, and the length of the day is 6-72 hours. All conditions of illumination and heating are Terran normal. In short, the planet exhibits those characteristics of climate and temperature which would make it a veritable "twin" of Terra. Type One planets are highly prized for colonisation.
2	<p>The planet is at a favourable position in the Ecosphere, orbital eccentricity is less than 0.2, and the length of the day is 6-72 hours. The axial tilt is under 10°, and this factor significantly affects climate and temperatures on the planet.</p> <p>The planet is marked by clearly defined and relatively unchanging belts of climate. illumination and temperatures are quite high in equatorial regions, with temperatures over 60°C not unlikely. Depending upon available moisture, either a dense jungle or desert belt will develop along the equator. Middle latitudes have temperate to tropical climates and temperatures. Because there is little seasonality, the climate exhibits a spring-summer-fall pattern, and freezing temperatures are rarely experienced. High latitudes "enjoy" a standard four season climate, with spring, summer, and fall all marked by night-time temperatures around the 0°C mark. Winters in high latitudes are as cold as on Terra, but do not last nearly so long.</p>
3	<p>The planet is at the optimum position in the Ecosphere, orbital eccentricity is less than 0.2, and the length of the day is 6-72 hours. The axial tilt is more than 30°, and this factor significantly affects climate and temperatures on the planet.</p> <p>Large portions of the planet experience continuous day or continuous night for long periods. Illumination and temperatures will be high over much of the planetary surface during the summer. Even polar regions enjoy temperature conditions at that time. Summers are tropical in middle latitudes. Equatorial regions are hot for all year.</p> <p>Winters are Sub-Arctic in middle latitudes. Regions immediately bordering the equatorial zone have temperate conditions in the winter. High latitudes experience winter conditions comparable to those in</p>

Antarctica, with temperatures of -60°C to -90°C. Continual darkness prevails over much of the globe tilted away from the sun.

Such extremes in climate and temperature prevent tropical jungles from developing outside of a narrow band along the equator. Middle latitudes largely possess stunted trees, extensive steppe, and deserts. Higher latitudes are steppe and tundra. All life forms are tough and highly adapted to the severe changes in the climate. Animals will embark on migrations to warmer regions at the onset of fall and winter. Those which remain either hibernate or develop rich pelts and fatty tissue to guard against the cold.

- 4 The planet's orbital eccentricity is less than 0.2, the axial tilt is within 10° to 30°, and the day/night cycle is 6-72 hours. The planet is placed at the extreme outer edge of the stellar Ecosphere, so illumination and temperatures are lower than on Terra.

Conditions are somewhat "chilly" but not overly severe. The equatorial belt enjoys temperate conditions, with warm summers and cool winters. The only forests on the planet would be located here, as even in the middle latitudes the conditions are too cold in winter to permit survival of anything except stunted trees. Middle latitudes are Sub-Arctic, with steppe being typical. High latitudes are Polar, with summers marked by cool days and freezing night-time temperatures. Vegetation is similar to Arctic tundra, and a good third of the planet will have permafrost. High latitude winters will be bitterly cold. As in the case of Type 3 planets, the life forms will be quite tough and adapted to the planetary conditions. "Cold deserts" will predominate in poorly watered regions.

- 5 The planet's orbital eccentricity is less than 0.2, and the day/night cycle is 6-72 hours. The planet is placed at the extreme outer edge of the stellar Ecosphere, and the axial tilt is under 10°.

Illumination and temperatures will, again, be less than Terran normal. The equatorial zone has a temperate climate ranging through a spring-summer-fall pattern, with a relatively mild "winter" in the zone separating the equatorial region from middle latitudes. Indeed, because there is no pronounced seasonality, "winter" actually consists of a few days or weeks of temperatures around the freezing mark between the "spring" and "fall" seasons. Middle latitudes will have Sub-Arctic climates. High latitudes are gripped in eternal winter. Such a world is an "ice Planet." Most life forms would tend to concentrate in or near the temperate equatorial zone, with plants virtually non-existent beyond it. Animals living above the equatorial zone are superbly adapted to extreme cold (temperatures would range as low as -90 °C in high latitudes), and are fierce carnivores because of the relative absence of viable plant life on land. Their pelts would be very thick and rich.

- 6 The planet's orbital eccentricity is less than 0.2, and the day/night cycle is 6-72 hours. The planet is placed at the extreme outer edge of the stellar Ecosphere, and the axial tilt is more than 30°.

The entire planet experiences Polar conditions. The equatorial zone experiences a brief "summer." Vast areas of the planet are in long periods of continual darkness during the winter, and temperatures drop as low as -100°C in polar regions. Summer temperatures above the equatorial zone rarely are much above freezing. In the short growing season of the equatorial region, plants grow almost visibly to take advantage of every minute of favourable conditions. Animals eat anything that looks like food, and are adequately equipped with the physical characteristics needed to acquire that food. Their ferocity is clearly indescribable. The toughness of plant life should not be minimised either: plants will develop tough outer coverings, nasty thorns, and other defences to protect them from hungry animals. If the planet does have seas, large portions will be icebound throughout the year.

- 7 The planet's orbital eccentricity is less than 0.2, the axial tilt is within normal limits of 10° to 30°, and the day/night cycle is 6-72 hours. The planet is placed at the extreme inner edge of the stellar Ecosphere, so illumination and temperatures are higher than on Terra.

Depending on the amount of moisture available, the planet will be either a "Desert Planet" or a "Jungle Planet." Only polar regions have any chance of experiencing a real winter, which would be quite mild. Ice caps are small or non-existent. Equatorial regions are hot, with temperatures ranging as high as 70°C in desert regions. Middle latitudes are tropical jungles or deserts. Only very high latitudes could experience temperate conditions.

Jungle planets would be teeming with lush vegetation and numerous forms of animal life. Indeed, conditions could be considered ideal for various forms of "Dinosaurian" life or its equivalent, as the planet would consist of large expanses of dense forest, lush tropical savannah, swamps, and shallow seas.

Desert planets would tend to approximate the conditions recounted in the novel *Dune*, with very limited amounts of water available.

- 8 The planet's orbital eccentricity is less than 0.2, and the day/night cycle is 6-72 hours. The planet is placed at the extreme inner edge of the stellar Ecosphere, and the axial tilt is under 10°. Illumination and temperatures are higher than on Terra.

Because of the limited seasonality, distinct climate belts develop. Receiving intense sunlight all year around, the equatorial region experiences very high temperatures – definitely in the 70°C range. The equatorial belt might prove to be uninhabitable. A broad desert belt develops if water is not abundant. If water is available, the humidity of the equatorial region is equivalent to a steam bath. Middle latitudes are tropical. High latitudes are sub-tropical. Polar regions exhibit temperate climates, with ice caps being very small or nonexistent.

On planets with abundant water, strong frontal activity between the well-defined climate belts produces violent storms. Severe dust and sand storms result on arid planets. Life forms are tough and adapted to above “normal” temperatures, although some forms will be capable of tolerating cool weather if such conditions exist anywhere on the planet. Water-abundant planets will be humid, and vegetation will be tropical and sub-tropical, as will the animal life. Arid planets will have desert and steppe life forms.

- 9 The planet’s orbital eccentricity is less than 0.2, and the day/night cycle is 6-72 hours. The planet is placed at the extreme inner edge of the stellar Ecosphere, and the axial tilt is over 30°. illumination and temperatures are higher than on Terra.

Extreme seasonality is experienced because of the extreme axial tilt of the planet. The extreme seasonal conditions are felt across the face of the planet. The equatorial zone is blistering hot in the summer, and sweltering in the winter, never cooling to “reasonable” tropical temperatures. Higher latitudes fare little better.

Vegetation has adapted to the radical seasonal changes, perhaps maintaining a dormant state in the fiercest heat of summer and growing in the “cooler” conditions of fall, winter, and spring. Animal life is migratory and continually moves away from the regions in which the sunlight is most direct, or else it burrows deep to take cover from the hottest temperatures. Such planets will tend to be “Desert Planets” in the hot seasons but, if adequate water is available, the cooler seasons could see an abundance of lush vegetation.

- 10 The orbit of the planet is highly eccentric (above 0.2) and carries the planet beyond the outer edge of the stellar Ecosphere. Axial tilt ranges between 10° and 30°, and the day is 6-72 hours long.

To distinguish the “northern” and “southern” hemispheres, we shall refer to NH and SH. At the time the planet passes beyond the outer edge of the stellar Ecosphere, one hemisphere will be tilted away from the sun; let us assume it is NH. Winter conditions will be experienced by NH, with savagely cold temperatures decidedly below Terran-normal. At that time, even the equatorial region will experience temperate conditions at best because the planet is too far away from its primary to receive enough heat to maintain “tropical” conditions there. The Southern Hemisphere SH will be enjoying “summer” conditions during the period of farthest passage from the sun. Middle latitudes will have temperate conditions, somewhat cooler than Terran-normal. Higher latitudes will have sub-polar conditions, with night-time temperatures often dropping below 0°C. Polar regions of SH will probably attain temperatures above freezing only rarely, despite the “summer” season in that hemisphere.

As the planet re-enters the stellar Ecosphere, NH will begin to warm up. In spring, summer, and fall months, the temperatures could rise to near Terran-normal. The equatorial region would now attain climate conditions of a “tropical” or “semi-tropical” nature. The middle latitudes of NH would attain temperate conditions by midsummer, while the high latitudes would attain sub-Arctic and Polar summer conditions as on Terra. Meanwhile, SH, now tilted away from the sun, would experience a fairly typical Terran winter.

Life forms on such a planet would differ considerably between the two hemispheres. Life in NH would be adapted to cold conditions. Forests would end above the equator, giving way to taiga and finally to Arctic-like tundra characterising much of NH. The polar region of NH likely would be a permanent ice cap, with glaciation extending well southward in places. Animal life would be comparable to types found in Terra’s Sub-Arctic and Arctic. On the other hand, SH would exhibit a range of life not dissimilar to Terra’s temperate regions in lower and middle latitudes, as heating is sufficient to restrict the sub-polar/polar regions to the high latitudes.

- 11 The orbit of the planet is highly eccentric (above 0.2) and carries the planet beyond the inner edge of the stellar Ecosphere. Axial tilt ranges between 10° and 30°, and the day is 6-72 hours long.

Again, we distinguish the two hemispheres by NH and SH. While the planet is in the stellar Ecosphere, hemisphere NH is experiencing a fairly typical Terran summer, albeit somewhat warmer than Terran-normal because total heating received by the planet is greater. Climate belts would be shifted northward, with tropical and sub-tropical conditions prevailing well into the middle latitudes. Temperate climates would be found even in sub-polar regions. Meanwhile, SH would be experiencing mild “winter” conditions, with freezing temperatures rare below the high latitudes.

As the planet passes the inner boundary of the stellar Ecosphere, NH will be experiencing “winter” conditions. At this time, the amount of solar heating received by the planet is considerably higher, so no

really significant changes will occur except that middle latitudes will experience occasional freezing temperatures. High latitudes in NH will experience a proper winter, of course. It is SH and the equatorial region which evidence the most dramatic change in climate. Exposed to the intense direct sunlight of the period of closest passage to the sun, SH is heated to temperatures far above Terran-normal.

Desert and semi-arid conditions will prevail within the interiors of land masses, with lakes and streams drying up even in middle and high latitudes. Equatorial temperatures could easily reach 50°C to 60°C or higher, and even in high latitudes the continual, intense sunlight could produce subtropical temperatures.

On such a planet, life forms evidence considerable differences between the two hemispheres. Since warm “Terran” conditions prevail in NH fairly much throughout the year, vegetation and animals are largely tropical, semi-tropical, and temperate forms. In SH, however, life is adapted to the dramatic changes in temperature and especially to the availability/scarcity of water. Mass migrations of animals occur to escape the heat and drought of the summer of closest passage to the sun.

Vegetation becomes dormant in the summer drought and have tough outer layers and capacity to store water. Since drought conditions prevail over most of SH during its summer, all life forms are desert and steppe types. In extreme conditions, where the orbit carries the planet well inside the inner edge of the stellar Ecosphere, summer conditions in SH could be so hot and dry that all life forms would “go to ground” during the daylight hours, venturing out only in the “cool” 40°C to 50°C temperatures of the night. Plants would definitely be dormant at that time, as daytime temperatures would be 70°C or higher – too high for even the toughest desert plants to retain sufficient moisture if they are biologically “active.”

- 12 The orbit of the planet is so eccentric that the planet is carried right through the Ecosphere! Axial tilt ranges between 10° and 30°, and the day is 6-72 hours long.

The climate in such a situation can only be described as a “horror.” Seasonality is so extreme that NH would be experiencing the equivalent of a Terran Antarctic winter over most of its surface during the period of farthest passage from the sun. At the same time, SH would be enjoying a winter roughly equivalent to a normal Terran winter. During the time of closest passage to the sun, SH would enjoy temperatures and climatic conditions roughly equivalent to a Terran spring and early summer during its “winter” period because of the vast amounts of solar energy now reaching the planet. Meanwhile, NH would be experiencing a summer similar to that described for Planetary Type 11. The range between the hottest and coldest temperatures might be as much as 160°C, from 70°C in the NH summer to -90°C in the SH “summer.” Such “mixed up” conditions would result in a very unusual ecology. NH plants have their growing season in the warm “winter” months (where temperatures are, paradoxically, higher than in the theoretical summer when the hemisphere is tilted toward the very distant sun), and are dormant during the Antarctic “summer.” Animals of the hemisphere are very tough and adapted to the savage winters, probably migrating toward the equator during the cold “summer” and then back north again in the warmer “winter.” Along the equatorial belt, the growing seasons would be the spring and fall periods when the planet is in the stellar Ecosphere. When the planet is at its period of farthest passage from the sun, even the equatorial region would sometimes experience freezing conditions. In the period of closest passage, temperatures would be furnace hot and drought inevitable. In hemisphere SH, adaptation of plants and animals to prevailing conditions will be extreme, as they will have to contend with relatively cold weather on one hand and desert heat and dry weather on the other. Migration of animals is likely. In general, life forms would be truly “tough” by Terran standards and very competitive.

- 12-A, 12-B The conditions given for Type 10, 11, and 12 planets assume a normal axial tilt. Extreme minimum's (denoted by the suffix -A) and extreme maximums (denoted by the suffix -B) in axial tilt would produce conditions so harsh that life either would not evolve/survive or else would be so tough and adaptive as to challenge belief. To work out the general climatic conditions for such planets is just short of a nightmare: if one combines the worst of Planetary Types 5 or 6 with those of Types 8 or 9, as applicable, and then modifies the result in terms of Types 10, 11, or 12, one may obtain an idea of just how “difficult” things really are on these planetary types.

- 13 The planet lies up to 10% closer to the primary than the inner stellar Ecosphere limit given in the Stellar Primaries table. Conditions on such planets approximate those of Type 7, 8, or 9 planets, except that temperatures will be somewhat higher. Planetary variations of this type are denoted as Type 13/7, 13/8, or 13/9 to indicate the comparative planetary types. Generally, conditions on such planets are “minimal” and require some life support measures for Terrans and other life forms originating on more temperate planets. The native life forms are very highly adapted to high temperature environments.

- 14 The planet lies as much as 30% farther from the primary than the outer stellar Ecosphere limit given in the Stellar Primaries table. Conditions on such planets approximate those of Type 4, 5, or 6 planets, except that temperatures will be somewhat lower. The planetary variations of this type are denoted as Type 14/4, 14/5, or 14/6 to indicate the comparative planetary types. Conditions on such planets are “minimal” and may require extensive life support measures for Terrans and other life forms originating on more temperate

	planets. The native life forms are very highly adapted to low temperature environments.
15	The planet lies too close to the primary to be considered as inhabitable by any form of hydrocarbon life. Surface temperatures could easily range from 100°C to 750°C (cf.: Venus and Mercury as examples of such planetary types).
16	The planet is significantly removed from the stellar Ecosphere to be totally uninhabitable by hydrocarbon life. Temperature range (noontime maximums): -80°C to -185°C.
17	The planet is very far removed from the stellar Ecosphere, and conditions approach those of the outer planets of the Sol System. Temperature range (noontime maximums): -185°C to -225°C.
18	The planet is extremely removed from the stellar Ecosphere, and surface conditions are approaching Absolute Zero (-273°C). Atmospheres, if any, are “frozen.”
19	The planet is a “rogue” in interstellar space or else is in a comet like orbit about a distant primary. Such worlds have temperatures approaching Absolute Zero (-273°C). Atmospheres, if any, are “frozen.”
20	The planet is a “Gas Giant” with low density. When indicating orbital placement, this type is denoted as Type 20/15 (close to primary), 20/E (within stellar Ecosphere limits), 20/16, 20/17, or 20/18.
VS	When a planet is orbiting a variable star, the prefix VSis placed in front of the planetary Type number; e.g.: Type VS-9. In determining planetary classification, conditions at minimum brightness of the variable star are considered. In most instances, conditions would be too extreme for life to evolve or to survive on planets placed within the theoretical Ecosphere or closer to the primary. When the star brightens, temperatures in such a zone would rise considerably. Temperatures would fall just as dramatically. If the variable star is a long term variable with a relatively minimal increase in brightness (under 0.5 magnitude or 1.6 times its minimum luminosity), surface conditions might prove liveable. Indeed, such a planet would be located in Type 14 position, but would evidence Type 12 characteristics: VS-14/12. Stars with higher ranges of brightness/dimness would not support habitable planets, while eruptive variables would be so inimical to hydrocarbon life that survival on their planets would require extensive life support, especially shielding against high temperatures, intense hard radiation, and shrivelling ultraviolet levels which would bathe during flare periods.
MS	<p>The planet is in a multiple star system. If a planet is orbiting in a system with two or more stars, the prefix MSis placed in front of the planetary type number. If the stars are very close together or are very far apart, there is a chance that the planet will lie in an orbit such that illumination and heating are more or less constant. However, if the stars are only moderate distances apart, such a planet would experience periods of intense illumination and heat alternating with periods of dimness and cold. In fact, this situation is summed up by the notation MS-12 (extreme eccentricity of orbit) and may be even more severe.</p> <p>Effects of lighting will be unusual in multiple star systems, as there will sometimes be two or more suns in the sky at the same time, casting multiple shadows as a result. If one of the stars is far distant, an exceedingly bright star will be seen at night.</p> <p>In those instances where one of the stars in a binary system is small and dim, conditions will not be significantly different than in a single star system; for the effect of the dim star will be minimal unless the planet makes an exceedingly close passage. Where a clear danger lies is in the ability of a smaller star in a multiple system to render a planet's orbit unstable and carry it to a less favourable thermal zone.</p>



Hydrographic Features

Water is essential to all forms of hydrocarbon life. Water is also vital to development of viable climatic and weather patterns.

Dry Planets



A planet with less than 40% free-standing water in lakes, seas, and oceans, will tend toward semi-arid and arid conditions over most of its land surface. There is simply too much land and too little open water for good distribution patterns of precipitation to develop. Regions located around bodies of water will become rich oases in the middle of dry steppes and deserts.

Desert Planets



Free-standing water is under 10% of the planetary surface. Conditions resemble Terran deserts over most of the planet. Extreme conditions approximate those described in Frank Herbert's novel *Dune*. Human-type personnel require some form of protective clothing and filter masks to prevent dehydration and to protect against high dust concentrations in the air. Shelters have to be sealed to maintain the humidity of the interior air, and some form of insulation/air conditioning would be required to keep interior temperatures within comfortable limits. (Such planets could also be "cold deserts" if their orbital placements and other factors result in low temperature conditions, again requiring appropriate lifesupport measures.) "Water discipline" is mandatory.

Arid Planets



Free-standing water is under 25% of the planetary surface. Conditions tend toward desert in the interiors of land masses. Better watered regions resemble Terran prairies and steppe-lands like those of the American West, Russia's steppes, and the African veldt. Cold planets or regions have steppe/wasteland conditions comparable to the Mongolian plain. Extreme conditions compare to those encountered in America's Death Valley or the worst parts of the interior deserts of Australia, the Sahara, and Arabia. Polar and sub-polar regions compare to the Terran Arctic. Some forested regions might be encountered in areas receiving adequate precipitation, and narrow strips of woodland exist along permanent waterways and around lakes.

Steppe Planets



Free-standing water is under 40% of the planetary surface. Conditions resemble those of the Arid Planets, except that forested and well-watered steppe lands would be considerably larger in extent. Precipitation patterns permitting, some tropical forests might appear in equatorial regions, with true jungles and rainforests. On the whole, water is still scarce but relatively more abundant than on Arid Planets.

Tundra Planets



When planetary temperatures are low, a large portion of the water will be "locked in" by surface or by permafrost lying 20 to 50 cm below the surface of the soil. The effect is quite "desert like," and tundra conditions could be described as "cold desert." Type 14 planets will often be Tundra Planets. Generally, conditions would resemble those of the High Arctic and Antarctic.

“Terran” Planets



For a planet to evidence conditions similar to those on Terra, the amount of open free-standing water will have to range from 40% to 80% of the planetary surface. There will be a number of large seas and oceans, and many streams and lakes will be found in the interiors of the large land masses. Climatic types will be similar to those on Terra, and present in as great a variety. Those planets with 40% to 60% surface water will be “transitional,” standing between Steppe Planets and Terranormal. Typical planets are Type 1.

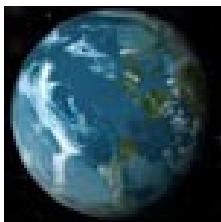
Swamp & Jungle Planets



Free standing water ranges from 70% to 85% of the planetary surface on Swamp/Jungle Planets, with much of the land surface low-lying. Arms of the shallow seas often penetrate far inland, providing ready sources of moisture for precipitation. The low-lying land will be poorly drained and therefore often swampy. Such planets tend to be located toward the inner edge of the stellar Ecosphere and experience above Terran-normal temperatures. Humidity levels are high and precipitation heavier than on Terra. Type 13 planets are the most likely candidates if sufficient water is available; otherwise they could develop into Dry Planets. “Terran” Planets could also be of this type if a “heat trap” effect is produced by excessive carbon dioxide levels in the atmosphere and land forms are of the type described above.

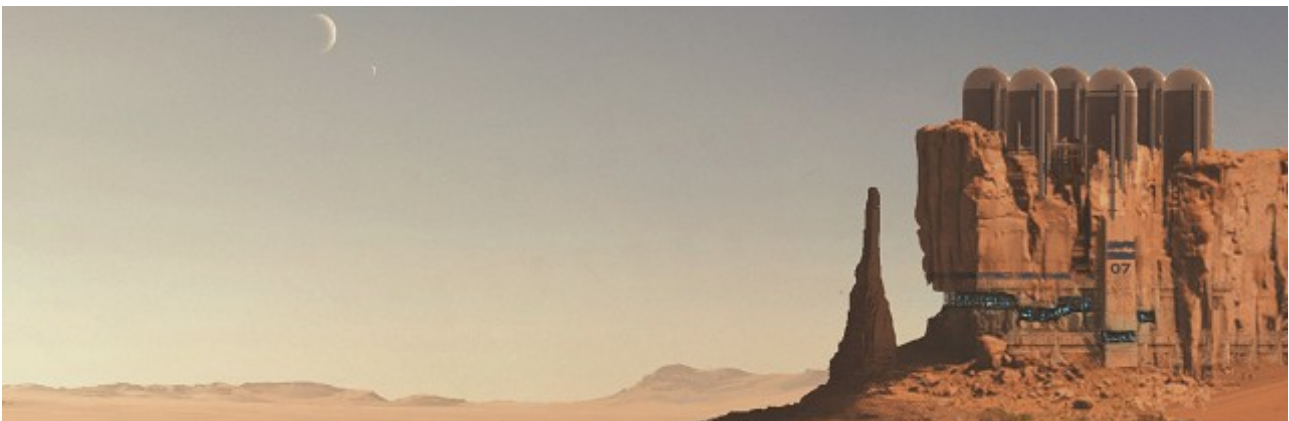
Swamp/Jungle Planets could also be “young” in development, comparable to Terra during the Age of Dinosaurs or the Carboniferous Period. Such planets could therefore have giant amphibians and dinosaurs (or their local equivalent) as well as dense and lush vegetation. Otherwise, life forms will tend toward tropical and semi-tropical varieties like those of Terra.

Ocean Planets



When the free-standing water is in excess of 80% of the planetary surface, conditions across most of the planet will tend to be “maritime” in nature. Land masses tend to be small, with many island archipelagos and individual islands dotting the planetary seas and oceans. The humidity will be high and the precipitation adequate to heavy, especially where temperatures are high. Because of the large amounts of water vapour present in the atmosphere, storms will be violent in the warm seasons, with hurricanes and typhoons common in equatorial and middle latitudes. Even polar latitudes will enjoy moderate marine climates in the winter.

The presence of vast amounts of water vapour in the atmosphere will create extensive cloud cover which will protect the planetary surface from both excessive heating and excessive cooling. Thus extreme conditions caused by axial tilt or orbital position will be moderated, and conditions will be quite liveable where they might otherwise have been unacceptable.



Breathable Atmospheres

Some planets will have atmospheres much like Terra's, with pressure and atmospheric gases within the tolerance limits of most races. Others will have thin or dense atmospheres, or may have concentrations of gases at narcotic or toxic levels.

The general age and state of development of a planet will be important. Young planets would not have had the time to develop truly Terran atmospheres. Old planets would have suffered the escape of some gases and, if not possessed of a high gravity field, pressures might be fairly low.

Terran Atmospheres

For Terran life forms, the essential ingredients of a breathable atmosphere are oxygen and minor amounts of water vapour. Nitrogen is essential to Terran plants and serves as an atmospheric "dillutant." Other gases may be present. A planet rated as having a "Terran" atmosphere will be acceptable to most races.

Thin Atmospheres

When the inspired pressure of oxygen falls below 60 mm, Terrans will suffer from hypoxia. This condition will be encountered on planets with low atmospheric pressures or at high altitudes. Also, since the atmosphere does act as a heat-trap and heat-engine to hold and distribute solar energy over the planetary surface, a thin atmosphere will not effectively maintain temperatures at comfortable or tolerable levels. Daytime temperatures might be reasonably satisfactory, but heat loss on darkside could result in very low temperatures. What is worse, thin atmospheres will likely not contain sufficient ozone to filter out ultraviolet radiation.

Dense Atmospheres

Planets with dense atmospheres may have concentrations of gases which approach or exceed the maximum limits tolerable by Terrans. The air is not toxic but is so dense that it is literally too thick to breathe. Only at high altitudes can humans breathe comfortably without a pressure suit. Over long periods of exposure, reduced blood circulation results in numbness, cramps, and even life-threatening clots. Pressure suits must be worn on these worlds. Local conditions could easily push concentrations over the limit into the narcotic/toxic zone.

Exotic Atmospheres

Planets with "exotic" atmospheres contain unusually high concentrations of gases. These may have narcotic effects producing erratic behaviour and eventual unconsciousness. Use the drug effects rules (section 6.20) to determine effects on characters. The time to take effect will vary, depending on the concentrations of gases present, usually a period of some minutes. Regular checks can be made for personnel who do not succumb on the first CR. Toxic gases can similarly be treated. The Game Master can also rule that gas concentrations will effect members of some races, but not others.

Corrosive Atmospheres



Some atmospheres will have corrosive components which may increase the breakdown numbers of some exposed equipment or which may cause physical damage (burns skin, etc.) The effects might be checked at regular intervals (hourly, daily, etc.), with a 1d20% chance of actually causing breakdowns or "wounds." If the probability turns up on a 1d100 roll, roll 1d6 and either apply the result to the breakdown number or to the character as a "minor" wound.

Humidity

An important constituent of any Terran-breathable atmosphere is humidity. The amount of water vapour in the atmosphere has profound implications for Terran life forms and ecologies. High humidity at high temperatures can prove to be uncomfortable and sometimes dangerous. Low humidity, especially at high temperatures, will cause serious physiological complications: rapid drying of mucus membranes of the nose, mouth, and throat; dehydration, and eventual

delirium, coma, and death as dehydration becomes extreme. Even when sufficient liquid water is present for drinking dehydration of the moist tissues will bring respiratory complaints and eventual illness.

Dust

Terrans will find dust concentrations in excess of 1765 million particles per cubic meter of air to be unhealthy if the silica content is under 5%. High silicate dust (over 50% free silica) should not exceed 175 million particles per cubic meter of air. Dust concentrations higher than these are harmful to the respiratory system, and prolonged exposure could cause silicosis and other lung degenerative diseases.

“Hot Planet” Atmospheres



Planets located close to a star might have fairly “exotic” atmospheres, like that of Venus. Venus could be taken as a model of such highly exotic conditions: primarily carbon dioxide, with traces or water vapour, oxygen, some hydrocarbons, and other “trace” gases. Temperature conditions on such planets will be furnace-like. Light gases (helium, hydrogen, etc.) will “escape” over the millennia because of the high-intensity solar heating in the upper atmosphere, and minute traces would remain. High concentrations of carbon dioxide would produce such a “greenhouse effect” that surface temperatures could approach 400°C or more.

“Cold Planet” Atmospheres



Planets distant from a star will have “unusual” atmospheres by normal Terran standards. As the distance becomes progressively farther, certain gases will become liquid or solid. Water freezes at 0°C, and by -75°C only minute traces of tiny ice crystals would be present in the atmosphere. Carbon dioxide turns to “dry ice” at -78.5°C. Nitrogen liquefies somewhat over -100°C. Methane liquefies at -161.5°C and is slushy by -184°C, at 1 TSP. Oxygen liquefies at -183°C. Some gases, like helium, remain liquid near absolute zero and exhibit highly unusual effects. Most, however, will be in a solid state by the time that 400°C is reached.

Surface conditions on planets with very cold temperatures will prove onerous and dangerous. Terran personnel will require heavily insulated pressure suits to avoid rapid and fatal heat loss to the environment. Many of the gases and liquefied gases are very heat conductive at low temperatures and will draw heat away from warmer objects with ease. Other less pleasant phenomena may also result.

Non-existent & Trace Atmospheres

Some planets will have no atmosphere or else only trace amounts of some gases. Surface conditions will approximate those of space itself. Close to a star, daytime temperatures are “hot” in the sense that any object in sunlight are heated by the direct rays of the star. In shadow, an object might be a great many degrees cooler than a nearby object in sunlight, although heat conductivity through the ground might heat it considerably if the day is long. On the darkside of such a planet, cooling may result in objects on the surface being many degrees below 0°C by the following dawn. In such conditions, insulated pressure suits and sun-screens will be necessary protective.



Colony World Classifications

Humanity has explored hundreds of worlds, and has established dozens of colonies and outposts. Game Masters should feel free to add to, amend, or alter the colony worlds as desired, and to create new worlds that suit his game.

Colonies grow at varying rates, depending on the corporate support they receive, and the biosphere of the world they are on. Eventually most colonies reach a point where they become a positive asset to the corporation which funds it, by producing trade goods, and after a generation, skilled workers.

These skilled workers are part of the rapidly growing populations of the colonies, and the corporations have developed many techniques for managing them successfully. Colonists are taught to live active, disciplined lives, to maximize their economic value and to reduce the risks of living in the colonies. Good educations are available for all.

By contrast, the disorganized state of the population of Earth means that there are fewer people there who are as well disciplined and well-educated as the people living in the colonies.

Class 1 Colony World

The greatest prize in the colonisation of extrasolar planets, a Class 1 Colony World is classified by the ICA as being a hospitable, Earth-like planet with a biosphere that features an abundance of liquid water, oxygen-rich breathable atmosphere, comfortable climate and either the existence of indigenous flora and fauna, or great potential to support terrestrial life. Most such planets lie within the parent star's comfort zone.

All planets so far classified Class 1 by the ICA are highly prized, and when the highly prized Colonisation Development Contracts (CDCs) are issued, there is usually a frenetic bidding war by interested megacorporations.

Planets classified Class 1 in Far Space are not subject to ICA regulation so far. Those that are in UEF territory are being rapidly developed, and emigration requests to such worlds are always very high.

All Class 1 colonies in the Core Systems have extensive orbital facilities, high-tech manufacturing, heavy industry, and are almost completely self-sufficient.

Class 2 Colony World

Class 2 Colony Worlds are classified by the ICA as being habitable planets that have borderline biospheres adaptable to human use through short to medium term terraforming projects. Most established Class 2 colonies have two important attributes: manufacturing capability, and an orbital spacecraft service facility.

The exact level of technology available varies with each colony, but all have at least some ability to manufacture their own goods. They are self-sufficient in the most vital commodities: food, water, and air. The most advanced Class 2 colonies even have full high-tech manufacturing and heavy industry.

Class 3 Colony World

Class 3 colonies are established on worlds possessing deposits of valuable raw materials, but which otherwise would not be desirable for human habitation. If the extraction of the planet's natural resources can be made economically viable, corporate investment will fund a colonial mission.

Few have more than rudimentary manufacturing ability. Long term terraforming projects are initiated on worlds with potential but as this involves decades of expensive work before the world is truly habitable, the resources on the planet must be sizeable. Some Class 3 colonies will eventually become habitable, and thus be moved up to Class 2 status. Others will remain Class 3.

Population on Class 3 colonies is small, usually ranging from no more than a few hundred to a few thousand technical staff and their families to service the automated terraforming/mining machinery.

Outpost

Outposts are planets which possess no established civilian colony, but are nevertheless occupied. On some Outposts, there are also top-secret military and scientific facilities. Weapons tests, unusual research, and high-security prisons are placed here. Others that are referred to as Garrison Worlds, have been fortified for military purposes. The fortifications consist of deep space sensor arrays to detect the arrival of ships in the system, and a number of craft for in-system defence.

Orbital and Deep Space Stations

It is said that space stations are like snowflakes – there are no two that are identical. While this is not exactly true, there is a staggering variety of stations, both in layout and function, across the solar system. Some stations are not much more than warehouses in space. These basic stations are used by corporations and governments to store or stage goods, machinery, and just about anything else of which you can think. Many of these stations are little more than open skeletal structures with docking clamps that hold cargo containers waiting for pickup. At the other end of the spectrum are the massive luxury resort stations that have become popular vacation spots. Some of these stations are located literally in the middle of nowhere, in order to stay out of the jurisdiction of any government or corporate entity, which enables them to offer services that would be frowned upon at best, and outright illegal at worst. Such stations are, naturally, secretive.

Orbital and deep space stations follow two very distinct design philosophies. Orbital stations, which refers to stations that are built around colonized planets, moons, and asteroids, tend to rely on resupply from the planet or colony they orbit. This comes either in the form of direct shipments from the planet or colony, or through logistic ships that supply the colony itself. As a result, orbital stations generally do not have space dedicated to hydroponics and maintain a smaller reserve of fuel for powering their reactors. These stations also tend to rely on the native defenses of the planet or colony and, with the exception of military stations, are generally unarmed or have a very light suite of defensive weaponry and systems. They also tend to maintain smaller support staffs since the station can easily call upon personnel from the planet or colony should the need arise.

Deep space stations generally refer to stations that are built in the deep black between the orbital paths of planets. As a result, these stations need to be much more self-reliant. Deep space stations support large hydroponic gardens to provide both a native food source and a natural carbon dioxide recycling system. Many times, these gardens are designed to be as natural-looking as possible in order to provide crew and guests a more natural environment to relax in from time to time. In many cases, small animals, birds, and insects are an integral part of the garden; though when this is the case, their populations are tightly controlled and special measures are taken to ensure they do not escape the garden area. Deep space stations also maintain a much higher reserve of fuel and other supplies should an event mean the station is going to be isolated for longer than normal. The crews on these stations are also large since, again, they must be as self-reliant as they possibly can be. Finally, deep space stations tend to be well-armed in order to protect themselves from would-be pirates or raiders that may see it as a target of opportunity.



Tin Can

The earliest space stations, a few of which remain in operation today, are commonly referred to as "tin can" stations. These stations are essentially hollow shells made of metal, pressurized to maintain a breathable atmosphere. In some cases, multiple modules are interconnected by tethers. These stations were originally designed to accommodate no more than a few hundred residents and lack the provision of artificial gravity.

Asteroid Habitats

Asteroid stations, a relic of earlier designs, consist of cavernous hollowed-out asteroids or massive rock formations. While they offer affordable protection against the harsh radiation of space and serve as adequate insulation, they lack the luxury of simulated gravity, leading to disorienting living conditions. Often utilized as temporary mining outposts or hidden operational bases, asteroid habitats continue to find practical applications. Although some of the larger habitats can accommodate thousands of residents, the reality is that only a few ever reach such capacity.

Stanford Torus

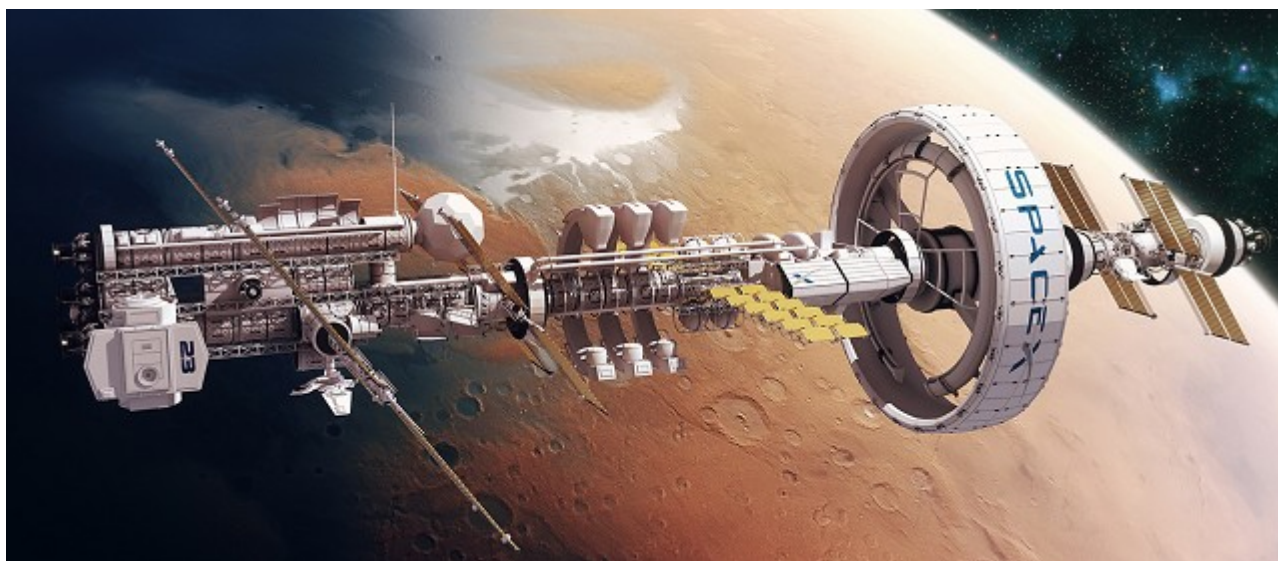
The prevalent space station design still in use today is the new Stanford Torus construction, which gained popularity from the 2090s to the 2170s. These stations feature a large donut-shaped ring, typically around 2 km in diameter. The ring rotates to create artificial gravity, making it suitable for accommodating approximately 10,000 residents. Positioned at the center of the ring is a hub, connected to the ring by a series of spokes that extend outward. The hub incorporates a set of mirrors that efficiently channel sunlight into the station's ring, providing essential illumination.

Bernal Sphere

Since the 2170s, the Bernal sphere has emerged as a popular design for space stations. These stations consist of a hollow spherical shell that rotates to generate spin gravity. With a diameter of approximately 16 km, Bernal sphere stations can accommodate a substantial population ranging from 20,000 to 30,000 residents. Notably, at the poles of the sphere where the gravity is at its weakest, the station's material is transparent. This strategic placement allows for the incorporation of a network of exterior and interior mirrors, effectively directing sunlight into the station and illuminating its interior spaces.

O'Neill Cylinder

The O'Neill design, which is gaining prominence in stations like Mandala Station and other proposed projects, presents a unique concept in space station architecture. It features two counterrotating cylinders divided into six sections along their length. These sections alternate between transparent segments that allow natural sunlight to permeate the station and designated "land areas" where inhabitants reside. With a diameter of approximately 5 km and a length of up to 32 km, each O'Neill cylinder can comfortably accommodate a population of up to 100,000 residents. This innovative design offers a harmonious blend of living spaces and controlled exposure to external celestial radiance, creating an environment conducive to sustainable habitation and exploration.



Space is Hell

by Wikipedia, Harold Page, Bruce R. Cordell & John Freeman

“Every single decision you make will be life or death. This is a class one quarantined planet. Everything on this planet has evolved to kill humans.”

General Cypher Raige – UEAF Ranger Corps

Space is vast, dark, and not your friend. Gamma rays and neutrino bursts erupt from dying stars to cook you alive, black holes tear you apart, and the void itself boils your blood and seizes your brain. In fact, compared to the vast, cold, wastes between the stars, the oases of light and warmth stars make for planets like ours to orbit in are the tiniest fraction of the universe – like floating candles, separated by vast stretches of dark Antarctic ocean.

Gas Giant Systems

Of all the places that your characters could find themselves, few have as much grandeur, opportunity, diversity and danger as a gas giant planet's system of moons and rings. Each can include dozens of moons, multiple rings of debris, complex radiation belts, and a galactic emperor's ransom in resources. Whether the giant is on the icy fringes of a star system or smack in the habitable zone, its moons can be a cornucopia of locations in their own right: Barren rocks, literal planet-sized diamonds, global oceans, volcanic hellsapes, Earth-like garden worlds and more. Saturn and Jupiter have around 80 moons each, including some of the strangest places known to humanity (like Saturn's moon Titan, where it rains liquid methane and snows organic molecules), and some of the most promising for alien life (like Jupiter's Europa, an ice locked and volcano warmed global ocean, 100 km deep).

Type	Climate	Jupiter masses (Mj)	Gravity at cloud tops (g)	Description	Notes
1: Bantam weights	Arctic	0.05 – 0.29	0.75 to 1	A nearly featureless blue or green orb punctuated by occasional light or dark storm clouds.	May be a suitable location for the extraction of deuterium fusion fuel, especially at the lower gravity range. Rings and upper atmosphere may be suitable for antimatter collection.
	Temperate			Covered in white water clouds	As for (1) Artic.
	Torrid			Minimal cloud cover, revealing a cerulean blue 'ocean' of gas. Some water-vapour clouds around the poles, if near inner edge of goldilocks zone	From low orbit the giant will emit palpable heat, even on its night side. Space craft will need thermal protection from both solar heat and giant, such as reflective sun-shades, active cooling systems, or significant reserves of cold, high heat capacity, materials (e.g. water ice)
2: Middle weights	Arctic	0.30 – 2.99	1 to 8	White ammonia or water ice cloud cover, banded in direction of spin, possibly colored by organic molecules and punctuated by storms. Visible lightning on night side.	Lower gravity ranges may be a suitable location for the extraction of deuterium fusion fuel, although export will be energy intensive. Rings and upper atmosphere may be suitable for antimatter collection.

	Temperate			Covered in bands of white water clouds, punctuated by darker storms. Visible lightning on night side.	As for (2) Artic.
	Torrid			The nightside may glow faint red or maroon, showing lighter or darker bands of atmospheric circulation.	As for (1) Torrid.
3: Heavy weights	Arctic	3 – 9.99	8 to 25	As for (2) Artic.	Rings and upper atmosphere may be suitable for antimatter collection. Gravity will be too high for efficient deuterium extraction. Reactors floating in atmosphere could beam microwave or laser energy off world.
	Temperate			Covered in bands of white water clouds, punctuated by darker storms. Visible lightning on night side.	Rings and upper atmosphere may be suitable for antimatter collection. Gravity will be too high for efficient deuterium extraction (a fusion fuel). Reactors floating in atmosphere could beam microwave or laser energy off world.
	Torrid			As for (2) Torrid.	As for (2) Torrid.
4: Super Heavyweights	Arctic	11 – 20	25 to 50	If very young (a few million years old) it may shine magenta, but otherwise it will appear as for (2) Artic.	A giant over 11 Mj may have shone as a brown dwarf in its early history. A giant bigger than 16Mj is likely to have done so. If a giant was a brown dwarf it will be deuterium poor (so unsuitable for fusion fuel mining or energy generation).
	Temperate			As for (3) Temperate. If very young (a few million years old) may glow dimly magenta.	As for (4) Artic.
	Torrid			As for (2) Torrid.	As for (4) Artic.

Radiation Belts

Radiation belts are made of ionised subatomic particles (mostly shed by the local star) trapped in a planet's magnetic field, so the radiation belts of gas giants are huge, and can be very intense: Jupiter's are thousands of times stronger than Earth's, and even Earth's modest belts are dangerous enough that spacecraft either entirely avoid them or fly through them as fast as possible. Most gas giant systems have the most powerful belt just outside any major ring system, or a couple of times the giant's diameter out. Further out are lesser belts, with secondary rings and major moons orbiting in the gaps between them – dust particles shed by solid objects absorb radiation, so moons and rings carve gaps in what would otherwise be a continuous radiation field. Radiation can also be trapped, and diverted, by the magnetic fields of moons. Together, these effects create a complex 3D radiation environment of secondary belts, filament, and loops that would need accurate, constantly updated, mapping to traverse safely.

The intensity of the radiation belts depends hugely on the moon system's proximity to the local star: The number of ionised particles passing into the magnetic field to be trapped increases by 4 for every halving of the distance. Another amplifier is a moon that emits gas into space – for example a volcanic moon, or low gravity water moon with geysers – orbiting near the belt: The escaping gas atoms get ionised by solar UV, or radiation already in the area, swept up by the

giant's magnetic field, and added to the particles in the radiation belt. Jupiter and Saturn's radiation belts are examples of this: Jupiter's are added to by the volcanic moon Io just beyond its main radiation belt, and Saturn's are intensified by the geysers of the water moon Enceladus spraying into space. The radiation increasing effect of an outgassing moon is large, but fixed. A giant with a weak magnetic field, far from its star, and with no active moons may have weak radiation belts, or none of significance at all.

Crews caught in the belt of a Jupiter sized or bigger giant would be dead of radiation sickness in a matter of hours, even with shielding, unless it was very far from its star with no active moons. Vehicles would suffer electrical discharges, power surges, and any unshielded microelectronics would become inoperable. Shielded systems would last longer, with glitches, but fail eventually. In any ring system the giant had, inner main system moons, or secondary radiation belts a crew would suffer radiation sickness, followed by long term radiation effects such as cancer. Unshielded electronic systems would behave unpredictably. Away from the radiation belt, but within the gas giant's magnetic field, crews would receive mild radiation sickness, and a significantly increased risk of cancer and other radiation related illnesses. Unshielded electronic systems would occasionally glitch, so a redundant processor core and memory will be needed to prevent malfunctions.

Source	Rad Level
Dose on an inner moon of 'arctic middleweights' moon system. (e.g. Jupiter's Europa)	2
Dose on innermost major moon of Jupiter, Io.	3
Dose inside radiation belt of low-mass 'arctic middleweight' moon system, with an active moon (e.g Saturn's)	4
Radiation belt of low-mass 'arctic heavyweight' moon system with no active moons	5
Radiation belt of mid-mass 'arctic super heavyweight' moon system, with no active moons.	6
Radiation belt of high-mass 'arctic super heavyweight' moon system, with no active moons	7*
Radiation belt of 'arctic middleweight' with active moon. (e.g Jupiter's)	8**
Radiation belts of gas giants with active moons	9***

*Rapid fatal whole-body dose, death within an hour.

**Rapid organ failure, death within minutes.

***Death within seconds.

Moons of Gas giants

There are several factors which differentiate natural satellite habitability and additionally extend their habitability outside the planetary habitable zone:

- **Liquid water:** Liquid water is an essential prerequisite for extraterrestrial life.
- **Orbital stability:** For a stable orbit the ratio between the moon's orbital period around its primary and that of the primary around its star, e.g. if a planet takes 90 days to orbit its star, the maximum stable orbit for a moon of that planet is less than 10 days.
- **Atmosphere:** An atmosphere is important in developing prebiotic chemistry, sustaining life and for surface water to exist. Gas giants have magnetospheres with radiation belts potent enough to completely erode an atmosphere of an Earth-like moon in just a few hundred million years. Strong stellar winds can also strip gas atoms from the top of an atmosphere causing them to be lost to space.
- **Tidal effects:** The effects of tidal acceleration can be a significant source of energy for natural satellites and an alternative energy source for sustaining life. Tidal effects could also allow a moon to sustain plate tectonics, which would cause volcanic activity to regulate the moon's temperature and create a geodynamo effect which would give the satellite a strong magnetic field.
- **Axial tilt and climate:** Moons tend to be tidally locked with their planets. Being tidally locked to a giant planet or sub-brown dwarf would allow for more moderate climates on a moon than there would be if the moon were a similar-sized planet orbiting in locked rotation in the habitable zone of the star.

Water covered moon:

Type	Minimum diameter	Hazards
1: Ice locked seas.	500km	Ice surface:

Ice surface. Subsurface seas of water or mud warmed by volcanism, or impacts.		<ul style="list-style-type: none"> • Tectonic activity. • Radiation exposure • Impacts from ring debris • O₂ low or absent • Temps of -100°C or below
		Sub-surface seas: <ul style="list-style-type: none"> • Volcanic vents • Cold and pressure
2: Ice covered world-ocean: Global ocean 100 + km deep, beneath km+ thick ice sheet. Brine lakes may be present nearer the surface.	500 km	Ice surface: As for (1), plus.. <ul style="list-style-type: none"> • Geysering • Unstable ice • Possibility of cryo-liquid storms, flooding. Subsurface ocean: As for (1), plus... <ul style="list-style-type: none"> • Higher organisms with predatory or defence mechanisms.
3: Open global ocean: Global ocean over a hundred km deep, warmed by volcanism, and solar heat.	6400 km	Ocean surface: <ul style="list-style-type: none"> • Waves can grow to enormous size (easily 70 meters +), • Icebergs • Hurricane like storms, able to persist for long periods and exceed category 5 Subsurface: As for (2)
4: Super ocean: Global ocean 1000+ km deep, making most of the moon's mass and radius.	8000 km	Ocean surface: As for (3) Ice surface: As for (2) Subsurface: As for (2) plus... <ul style="list-style-type: none"> • The ocean will blend gradually and seamlessly with its bed, creating high density, low visibility region. • Exotic ice in deep ocean explodes on rapid ascent. • Immense pressure in deep ocean.

Ice moon:

Type	Minimum diameter	Hazards
1: Atmosphere free ice ball Just a gigantic ball of ice and rock, floating in space	500km	<ul style="list-style-type: none"> • Space-like conditions: Hard vacuum, radiation and low gravity. • Impacts from micrometeorites, ring particles, and other debris. • Cryogenic temperatures
2: Ice ball with atmosphere A ball of ice and rock, surrounded with an atmosphere dense enough to support cryogenic weather (CO ₂ snow, ethane rain etc). May have a deep subsurface water ocean, also see water moon (2)	1600 km	If atmosphere is very thin: As for (1). If atmosphere is denser: <ul style="list-style-type: none"> • Drifts of snowed ices and/or organics • Lakes or rivers of cryogenic liquids, which generally provide much lower buoyancy than water. • Storms, flash floods, mudslides • Glaciers of low temperature ices (e.g nitrogen ice), exhibiting chasms, unstable ice, shifting landscapes. • Low visibility. • Cryogenic temperatures
3: Ice ball with atmosphere and/or cryovolcanism As for (2), but subsurface liquid water/ammonia erupts onto the surface through vents, and freezes, also see water moon (2)	1600 km	As for (2), plus... <ul style="list-style-type: none"> • Cryovolcanic eruptions of water-ammonia slurry, freezing as it moves and entombing objects.

- Explosive eruptions
- Quakes and other tectonic activity

Desert Moon:

Type	Minimum diameter	Hazards
1: Airless desert A barren expanse of ground up regolith, stone, mountains, and craters. No atmosphere, or water although the poles may hold some ice. Volcanic activity possible, and deep subsurface moisture. If it interacts with buried ice.	500 km	<ul style="list-style-type: none"> • Impacts from micrometeorites and ring particles. • Hard vacuum • Temperature variations, potentially from well below freezing to above boiling point near the equator. • Radiation • Potential volcanic activity, including explosive gas eruptions, and pyroclastic flows. • Surface dust is razor-edged, very abrasive, harmful if inhaled
2: Greenhouse atmosphere desert Average surface temperatures too high for liquid water. Surface pressure may be higher than Earth. Atmosphere subject to an intense greenhouse effect.	8000 km	<ul style="list-style-type: none"> • Extremely high temperatures across entire surface. • Potentially high pressures (50 bar plus) across surface • Acid rain and high winds at altitude • Lightening • Volcanic activity
3: Arctic / hyper-arctic desert: Atmosphere is too thin to retain heat, or shield from UV, and radiation, but thick enough to support sandstorms, some snowfall, Pure surface water will evaporate rapidly, but near subsurface brine seeps may be present.	3200 km	<ul style="list-style-type: none"> • Months long dust storms. • Temperatures as low as -200 °C • Thin, low oxygen atmosphere. • Radiation, if the atmosphere is thin. • UV exposure • Potential volcanic activity, including explosive gas eruptions, and pyroclastic flows. • Volcanic heat driven melt-water floods. • Toxic soil compounds.

Volcanic Moon:

Type	Minimum diameter	Hazards
1: Magma seas Runny magma periodically pours from chasms in the crust, pooling in depressions to create a network of magma rivers, lakes, and seas. May be variant 3 in low activity periods	500 km	<ul style="list-style-type: none"> • Moon wide heat • Quakes • Volcanic eruptions, • Pyroclastic flows • Lava flows and floods • Lava bombs • Geologically stable areas are unlikely.
2: Global magma ocean Has (geologically) recently suffered a massive impact, or formed from debris of an impact that destroyed an earlier moon. Entirely molten, except the core.	500 km	<ul style="list-style-type: none"> • Moon wide heat • Little or no solid surface
3: Moon wide volcanism, solid surface Surface is pocked by volcanic cones, chasms, and lava lakes to a great density. May resemble variant 1 during intense activity.	500 km	Similar to (1) but generally less severe

Asteroid-like moon:

Type	Minimum diameter	Hazards
1: Metal rich: A chunk of metal ores, tens of meters to hundreds of km across. A captured piece of the core of a destroyed protoplanet.	8,000,000 tons	<ul style="list-style-type: none"> • Space-like environment: • Hard vacuum, radiation, very low gravity, micrometeorite impacts
2: Dormant comet like: A chunk of carbon and water rich debris dating back to the early solar system. Tens of meters to hundreds of km across.	40,000 tons	As in (1), plus... <ul style="list-style-type: none"> • Mechanically weak, unstable, surface • Pockets of volatiles may erupt if warmed
3: Shepherd moon A small moon, tens of meters to km across, which orbits in or very near a ring system, and confines the ring particles with its gravity.	Around 125,000,000 tons	As in (1), plus... <ul style="list-style-type: none"> • Mechanically weak surface • Pockets of volatiles may erupt if warmed • Continuous impacts from ring particles, some of which may be large enough to be hazardous
4: Stony A chunk from the mantle of a destroyed protoplanet or moon. Tens of meters to hundreds of km across. Largely silicate rock.	2,650,000 tons	As in (1)

Supernova

A supernova is a powerful and luminous stellar explosion. When a big star explodes biggly – are not just events, they are also long lasting environments. They don't just leave a wake of destruction, their remnants continue to pump out lethality in the form of radiation for millennia after, with conditions getting worse the closer you are to the centre. This creates, for example, a vast region of dangerous to visit dead worlds.

On average a galaxy the size of ours gets about a supernova every hundred years. Risk stars are easy to spot; They're hugely bright, blue or blue white, and tend to be in star clusters. Predicting exactly which, and when, one will blow is difficult, since it depends on the mechanics of the star's core, hidden from sight behind millions of km of star stuff. While nearby stars likely to spawn a supernova can be spotted using basic telescopes and astronomy, prediction of time to detonation needs advanced technology and understanding of stellar and particle physics. For type 2 supernova a pulse of neutrino particles occurs when the core collapses. As neutrinos pass through matter and travel at lightspeed they are detectable 1d3+1 hours before the blast works its way to the star's surface and the supernova begins.

Range	Visuals	Duration	Rad Level
1000 – 5000 A.U.	A light as bright and hot as a billion nuclear bombs, lasting for months to years.	50,000 – 100,000 years	8
1 – 5 LY	A very bright blue star grows sun-bright over 1- 3 weeks, and takes approx 18 months to fade. In its place is an expanding nebula with an exotic object (e.g. black hole) in the centre.	20,000 – 50,000 years	5-7
10 – 50 LY	A bright blue star grows to thousands of times brighter than the full Moon over 3 weeks, and takes approx 12 months to fade. Unprotected viewing will cause permanent eye damage. The nebula left behind will take decades or centuries to grow enough to be visible to the naked eye.	Up to 2 years	2-4
100 – 250 LY	A blue star grows to thousands of times brighter than the full Moon over 3 weeks, and takes approx 12 months to fade. Prolonged unprotected viewing causes lasting eye damage.	Up to 1 year	1

Rogue Planets

Rogue planets are natives to the interstellar dark – formed independently, from the same cloud of dust and gas that was birthing stars all around them. Those wanderers have never known a sun's warmth, and likely never will.

The major one, unless a planet is very young, or recently got hit with something very big, is heat from the decay of radioactive elements in its core. How much heat this generates depends on how big the core of the planet is, and how concentrated those elements are. How well the heat is retained depends on how much insulating stuff lies over the core.

Zombie Rogue:

Zombie Rogues are rogue planets that have been dead for billions of years but are still wandering. Their surfaces will be extremely ancient, although less cratered than a similar world in a star system, and may preserve galactic history by trapping cosmic radiation, and interstellar dust.

Type	Diameter (km)	View
ZR1: Rock ball Formed too near it's star to have much water or other low temperature materials, ejected soon after. Too small to still be geologically active or keep a thick atmosphere.	200 – 3000	Orbit view (if illuminated): An expanse of rock, pocked with craters on every scale. May have solidified lava lakes, volcanic cones and old tectonic features. May have multi-billion-year-old ice deposits, made of frozen primordial atmosphere, or volcanic gas (e.g. CO ₂ or N ₂) from the last eruptions - even enough to make ice sheets. Surface view (if illuminated): A landscape of different toned grey rock, covered in fine dust. The dust may have coloured patches - orange, green, black - due to tiny beads of volcanic glass mixed in. Frozen primordial atmosphere may be coloured red, pink or brown by traces of organic compounds.
ZR2: Volcanic rock ball Similar to ZR1, but big enough for periodic geologic activity, fading with time. Lacking water or carbon to support Earth-type life.	1500 – 3000	Orbit view (if illuminated): As for ZR1, but may have low-level volcanism and quakes. Surface features show signs of erosion by wind. Limited ice deposits may be present - Likely due to volcanic gas (e.g. CO ₂ or N ₂). Surface view (if illuminated): A desert of rocks and dust. Frozen volcanic gas may be present, coloured pink, red, brown or even black by trace organic compounds. Light sources are rare, and mainly from volcanism.
ZR3: Ice-ball Formed of ice and rock, far from its star, ejected young. No volcanism, or thick atmosphere. No antifreeze compounds.	250 – 4000	Orbit view: A huge ball of cratered ice, perhaps with a few chasms or rilles from ancient cryo-volcanism. Not likely to be pure white - stained by pink organic impurities. Surface view: An endless expanse of broken and pulverised ice, frozen hard as rock - like Earth's Moon but a much lighter grey. Ancient tectonic features - ridges, chasms, chaotic terrain - may survive.

Dying rogue:

These are worlds with substantial water ice, mostly frozen solid, but with small habitable oases kept liquid by volcanism or natural antifreeze deposits. However the oasis of DR world's are fading - these worlds are littered with the remains of those (often much larger) habitats that are already dead.

Type	Diameter (km)	View
DR1: Formerly habitable surface Surface froze after ejection. May have enough heat, insulating ice and/or antifreeze (e.g. ammonia) for buried water	3000 – 9000	Orbit view: Ice plains with chaotic terrain, faults, ridges, and 'lobate' features from subsurface water erupting. Reddish organics in the ice. Craters are rare, and distorted. Over

oases to persist. Quakes or cryovolcanic activity still occur.

the water ice may be the frozen atmosphere, (solid CO₂, nitrogen, methane, etc). May retain some atmosphere, supporting high altitude hazes or clouds that partly obscure the surface.

Surface view:
Endless buckled and distorted ice, with veins of brown or red organics. Mountains of rock may poke above the ice surface, which has ridges, valleys, ice-mountains and cryo-volcanoes. Signs of minor recent geologic activity: e.g. occasional eruptions of mud or brine onto the surface.

DR2: Formerly habitable subsurface
A habitable subsurface froze as the core cooled. Too little insulating ice or antifreeze compounds for subsurface water with current internal heat - small oases kept liquid by antifreeze compounds (e.g. ammonia).

500 – 3000

Orbit view:
As for DR1 but most geologic features will be ancient. May retain traces of primordial hydrogen atmosphere.

Surface view:
As for DR1, but most features will be extremely ancient, little recent activity.

Habitable Rogue:

The largest and rarest solid-surfaced rogues, the technical term for them is gas dwarf: These almost became the cores of gas giants, but ran out of gas to trap with their gravity. Even on the least massive any solid surface will be hidden deep beneath a heat retaining hydrogen/helium atmosphere thousands of km thick (compared to Earth's 100km deep atmosphere), trapping geothermal heat that builds up to Earth-like temperatures. Habitability is not guaranteed: Their surfaces may be scorchingly hot if geothermal heat and atmospheric insulation are too great, or frigid if they are too low. Even the most hospitable will have surface pressures on par with Earth's deepest oceans, making human habitation difficult without major physiological adaptation. Surface water would boil at 400 to 500°C.

Type	Diameter (km)	View
HR1: Massive atmosphere over ocean and land surface Seas and land, beneath an insulating high pressure hydrogen atmosphere thousands of km deep.	5000 – 18,000 (core) 9500 – 23,500 (atmosphere)	Orbit view (if illuminated): Very similar to orbiting Venus, Neptune, or Uranus: Endless cloud, possibly drawn into bands by the planet's rotation. Will be visible in infrared, as thermal radiation shines through the cloud layers. Surface view: The majority of the planet is utterly dark – the stars are totally screened by thousands of km of atmosphere. Illumination is limited to lightning and the occasional glow of molten lava erupting to the surface. Uniform climate, aside from volcanic areas – no separate tropics, or cold polar regions.
HR2: Massive atmosphere over desert surface As for HR1, but the surface is mostly land covered, with occasional small water bodies.	As HR1	Orbit view (if illuminated): As for HR1. Surface view: As for HR1, but bodies of standing water will be rare.
HR3: Massive atmosphere over ocean surface As for 1, but the surface is mostly water covered.	As HR1	Orbit view (if illuminated): As for HR1. Surface view: As for HR1 but with a far greater expanse of ocean. At the ocean bed the high pressure may cause the sea bed and water to blend, slowly moving from silty water to highly hydrated rock, without a clear boundary.

Black Hole

All bodies in space produce a gravitational field, though usually only things the size of a small moon or larger pose a hazard to unprepared (and sometimes even to prepared) spacecraft. The larger the body, the “deeper” and wider the associated gravity field. Any time a spacecraft launches from a moon or planet, it must escape the gravity well. That's either a routine task, or a low-difficulty one (assuming no complicating factors are at play).

Gravity wells become a hazard when a spacecraft encounters one unexpectedly— usually because of a navigational or sensor error, but occasionally because of a moon or extreme gravity source being someplace unforeseen.

- **Slingshot Trajectory:**

An unexpected encounter with a gravity well can sling a spacecraft off on a new and unwanted trajectory on a failed piloting task, the difficulty determined by the situation. In this case, the spacecraft must expend additional power, perhaps power it doesn't have to spare, or time it didn't budget, to reach its intended destination. In a worst- case scenario, the spacecraft doesn't have the power it needs and becomes "lost" in space, hurtling ever farther into the void. Rescue by some third party at some later date becomes the only option.

- **Captured:**

An unexpected encounter with a gravity well can also capture a spacecraft in the gravity well's orbit, forcing the craft to expend additional power to get free (power it may or may not have). A captured craft is either becalmed in orbit for months or years, or is caught in a decaying orbit that requires even more resources to pull free of before a craft is pulled in and crashes on the surface. If the spacecraft is designed to be able to land on the surface of planets and moons, it has at least a chance of surviving.

Black holes are just extreme gravity wells. All the dangers associated with a gravity well also apply to black holes. A couple of additional hazards are also associated with black holes, notably tidal destruction ("spaghettification"), time dilation, and being swallowed.

- **Tidal Destruction:**

The tidal force exerted by black holes is related to how deep their gravity wells are. Essentially, the gradient is so extreme that a body (whether a spacecraft or a human) feels gravity more strongly at one end than the other. This tends to pull things apart, long before they actually fall into a black hole. Perhaps unexpectedly, smaller black holes—that ships can accidentally or purposefully get much closer to than supermassive ones— are much more likely to exert this tidal force on spacecraft at close range.

Mechanically speaking, while a spacecraft feels tidal forces by passing too close to a black hole's event horizon, all tasks aboard the craft are hindered, the ship sustains major damage and risks coming apart. A ship near a very large black hole (like Sagittarius A*, the supermassive black hole at the center of the Milky Way Galaxy) can avoid tidal effects because the gravity gradient is so much wider, but still feel relativistic time dilation.

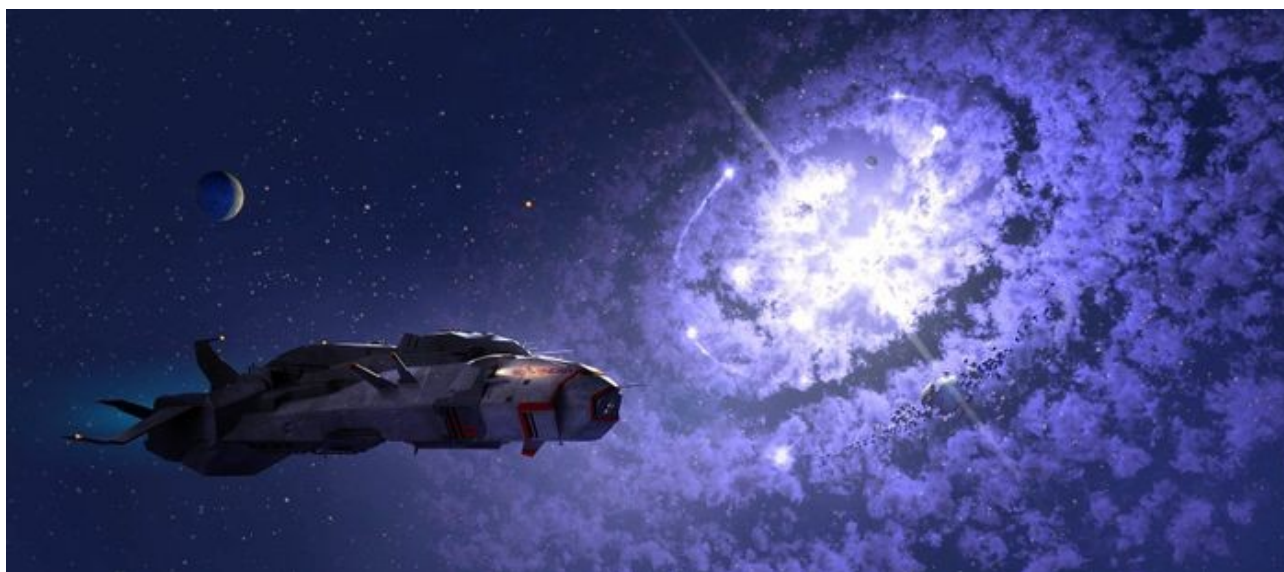
- **Relativistic Time Dilation:**

Black holes warp space and time. Though time seems to move normally for those on the spacecraft near a black hole, it's actually moving much more slowly relative to everyone in normal space.

From a mechanical perspective, spacecraft that survive close encounters with black holes and return to normal space discover that more time has passed than expected, which could range from fairly inconsequential minutes or hours, to far more serious days, months, years, centuries, or more.

- **Past the Event Horizon:**

The event horizon is the point of no return, where not even light can escape the clutch of gravity. If a spacecraft falls into a black hole, assuming it is not spaghettified by tidal forces, it is still lost from the universe of its origin.



The Colonies

by Wikipedia, John Ossoway, David Pulver, Thorin Tabor & Matthew Grau

"There are other worlds than this one, and if there is no air to breathe, we will simply have to make it."

Sir Peter Weyland – founder and CEO of Weyland Corp

The conquest of space was never an easy undertaking. Indeed, the first tentative steps into space by humanity were difficult and often costly. Despite the many obstacles and deterrents, Humanity gradually edged off Earth into space. The colonisation of space and with it the struggle to survive in often strange and hostile surroundings challenged the determination and ingenuity of human civilisation, but three hundred years since Neil Armstrong first set foot on Earth's lunar companion there are millions of people who call planets beneath alien skies home, many of whom have never set foot on the planet which will always be their spiritual birthplace.

Despite Sol being little more than another star in the night sky to many of these colonists, the majority are still tax-paying citizens of the United Earth Federation (UEF). Though the UEF would deny it in the strongest terms, it is to all intents and purposes an imperial power, with regional governors administering colonial assets. The maintenance of order in an interstellar civilisation requires a degree of control which to many is in itself undesirable, and the nearer one approaches the administrative centre of such a society, the more rigid its constraints.

Governed by the powerful Interstellar Colonial Authority (ICA), the Federal Colonies encompasses a sphere of influence 20 light years in radius with Sol at the centre. The UEF reserves the right to expand this sphere of influence, and annex any colonies lying beyond it's boundaries, up to and including all star systems in a 50 light year radius from Sol.

The Federal Colonies are split into four distinct regions:

1. **Zone 1:** The Sol System, controlled directly by the United Earth Federation.
2. **Zone 2:** The Core Systems – 12.5 light-years from Earth, controlled by the UEF via the ICA.
3. **Zone 3:** The Outer Colonies – 20 light-years from Earth, controlled by the UEF via the ICA.
4. **The Frontier:** The Outer Rim Territories – 50 light-years from Earth, ICA presence and influence is limited.

Life in the Colonies

"Ph'nglui mglw'nafh Cthulhu R'lyeh wgah'nagl fhtagn"
"In his house at R'lyeh, dead Cthulhu waits dreaming"

litany linked to the cult of Cthulhu

Over the past century, ships, stations, and even colonies have simply disappeared from the Frontier. Some attribute these losses to natural disasters or acts of God, others believe those involved fell prey to pirates or rival governments. Rumors of entire colonies being wiped out by a plague or nuked off the face of a planet have everyone on the Frontier living on the edge. Some even believe that man was never meant to leave Earth, and that space itself can swallow you whole.

Life in the colonies is rough. After being promised a utopia, settlers instead found a frontier existence of drudgery in harsh environments. To that end, many have turned to God to get them through their daily rigors. While traditional religions are practiced throughout the colonies, sects of apocalyptic millenarian fundamentalists have arisen, as have fanatical cults and zealots driven by charismatic leaders in isolated areas. Recent years have seen the rise of fledgling organizations with questionable motives, such as the Practitioners of the Holy Immolation and the Church of Immaculate Incubation.

Space is full of demons, and they want your blood. In any number of the locations cited above, you might run into a shady Colonial Marshal looking for his take, a greedy corporate XO who finds you expendable, or a psychopathic synthetic with a god complex. You could be waylaid by pirates or betrayed by a megalomaniacal military commander. You might find plague-ridden treasures and run afoul of a dangerous organism or a hostile alien species. Or you might face bloody cults, and confront immortal horrors beyond time and space.

In the midst of this turmoil, a sense of unease permeates the Frontier. Whispers of ancient cosmic forces, far beyond human comprehension, add to the prevailing sense of danger. The unknown beckons, offering both promise and peril, and those who venture into the void must grapple not only with the challenges of the physical universe but also with the eerie and unsettling mysteries that lie beyond.

The Core Systems




































"This is colony ship Covenant, reporting. All crew members apart from Daniels and Tennessee tragically perished in a solar flare incident. All colonists in hypersleep remain intact and undisturbed. On course for Origae-6."

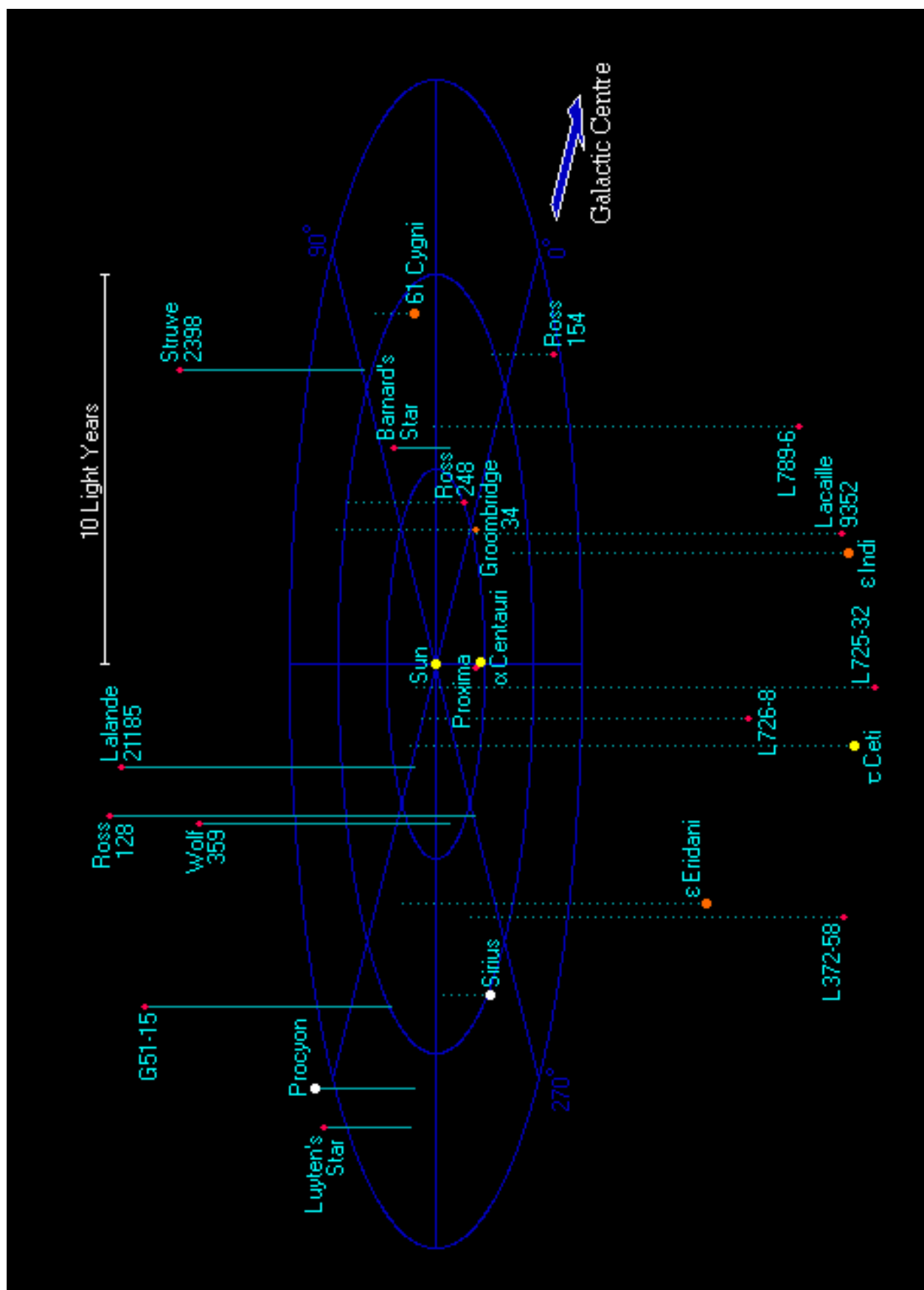
Walter One – Corporate Synthetic of the Covenant spaceship

Officially designated Federated Colonies Zone 2, the region of space known as the Core Systems encompasses all star systems within 12.5 light years of Earth. This region is controlled by the UEF via the Interstellar Colonial Authority (ICA). Territory within this region is not subject to national or corporate appropriation by claim of sovereignty. Colonies and outposts within this region are not considered to be the territory of any one nation or corporation. This means no territory within this region can declare itself a nation, independent of ICA control.

There are 22 UEF colonies in this region (not counting the Sol colonies, which fall into Federated Colonies Zone 1). Average journey time from Earth to the edge of the Core Systems takes just short of 4 Earth Standard Weeks. Heavily colonised with a high population-density, many colonies in this region are advanced industrial and agricultural worlds inhabited by hundreds of millions of colonists. All worlds possible are terraformed.

The Core Systems Table

Star type		System	Orbit	Colony	Political block	Class	population	Distance from Sol
M		Proxima Centauri	2	Proxima II		2	31 million	4.22 LY
G/K	 	Alpha Centauri	3 4 6	Hesperus Centauri Prime Helada		2 1 3	1.5 million 100 million 250 000	4.89 LY
M		Barnard's Star	1	Van De Camp's World		2	8.4 million	5.94 LY
M		Wolf 359	2 4	Andersen Hades		2 3	24 million 5 000	7.8 LY
M		Lalande 21185	1	Atlas		3	12 000	8.31 LY
A/D	 	Sirius	3	San Helena		3	150 000	8.6 LY
K		Epsilon Eridani	2 4	Terra Nova Anteros		1 3	7.2 million 250 000	10.5 LY
M		Lacaille 9352	2	Exeter		3	10 000	10.73 LY
M		Ross 128	1	Icarus		outpost	100	10.89 LY
F/D	 	Procyon	2 6	Tartarus Jotun		2 3	6.4 million 5 000	11.41 LY
K/K	 	61 Cygni	2 3	Tamir Ascension		2 2	10 million 22.3 million	11.41 LY
K/M	 	Groombridge 34	2	Groombridge		2	7.18 million	11.64 LY
K		Epsilon Indi	1 2	Bedlam Hallidon		3 2	10 000 31.4 million	11.83 LY
G		Tau Ceti	3	Anjuna		2	63.4 million	11.9 LY
M		Luyten's Star	1	Luyten's Folly		3	10 000	12.39 LY



PROXIMA CENTAURI



Main Star	Proxima Centauri
Type	M4 V
Age	4.6 billion years
Distance from Sol	4.22 light years

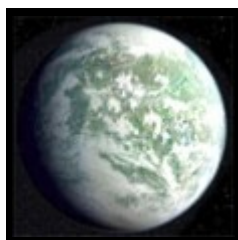
Description:

One of the closest stars to our sun at 4.22 light years away, and approximately a fifth of a light-year (13000AU) from the Alpha Centauri AB binary pair, Proxima Centauri is a dim main sequence red dwarf (M4V) star that has only 12.3 percent of Sol's mass and 14.5 percent of its diameter. Accounting for infrared radiation, the orbital distance from Proxima that will support an Earth-type planet with liquid water is around 0.2 AU.

Like many red dwarfs, Proxima is a "Flare Star" that can brighten suddenly to many times its normal luminosity. Its flares can roughly double the star's brightness and occur sporadically from hour to hour. Archival data suggests that the star may have a long-term activity cycle lasting decades.

This system's close proximity to the Alpha Centauri star system and its importance to the interstellar communications network have resulted in the presence of a large UEAF garrison.

Orbit 2: Proxima II Class 2 Colony



Orbit Radius	0.2 au
Type	Tundra
Density	1.10
Diameter	10600 km
Gravity	0.94 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.22
Composition	Oxygen/Nitrogen mix
Orbital period	71 days
Rotational period	37 hours

TEMPERATURE / SATELLITES

Polar	-37°C
equatorial	11°C
Satellite	2

UNUSUAL FEATURES

Cloud cover.

WATER

Water	Oceans
% water	47
% ice	39
% clouds	51

MINERAL RESOURCES

Metal ore	71
Radioactive ore	36
Precious metal	12
Raw crystal	0
Precious gems	10

Description:

On the edge of the habitable zone around Proxima Centauri, Proxima II, or simply Proxima as most locals call it, has a dense atmosphere and almost constant cloud cover that keep the planet damp and cold, with a large portion of the planet's water locked in surface frost. It is this dense atmosphere that protects the planet from the often harsh UV radiation emitted from Proxima Centauri during periods of solar flare activity, and has enabled humans to colonise the planet.

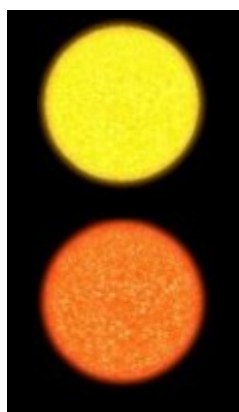
Because the light from Proxima Centauri is so much dimmer than that of Sol, indigenous plant life such as the mighty Barskog Trees have evolved foliage that is such a dark green hue as to appear almost black. These dark hues are

perfect for absorbing as much of the visible light that reaches the surface from the red star as possible. Unlike the majority of red dwarf stars, the red light emitted by the star Proxima is not too red in colour for Earth-type plant life to be unable perform photosynthesis efficiently. As a result, many species of plant and animal life have been successfully transplanted from Earth, giving the planet an eco-system similar to the lands found north of the arctic circle on Earth.

Proxima II was colonised early in the 22nd century, and the colony is over 140 years old. Proximans are very proud of the colonial heritage, and while being loyal to the Federation, they assert their national individuality fiercely. The colony's main industries are crystal mining and timber.

Proxima II is home to Proxima Incorporated, one of the largest of the interstellar mining corporations. Proxima Incorporated has a monopoly on mining in the Core Systems.

ALPHA CENTAURI



Main Star	Alpha Centauri A
Type	G7 V
Age	5.4 billion years
Distance from Sol	4.89 light years
Companion Star	Alpha Centauri B
Type	K2 V
Age	5.4 billion years
Orbit distance	23.7 au

Description:

At 4.89 light years from Sol, the binary star system Alpha Centauri is one of our closest stellar neighbours. Alpha Centauri A, or Rigil Kentaurus as it is also known (the "Foot of the Centaur" in Arabic) is a yellow-orange main sequence dwarf star of spectral and luminosity type G2 V. Its much dimmer companion star is a main sequence, reddish-orange dwarf (K0-1 V).

Scientists had long believed that Alpha Centauri was one of the relatively few places close to Earth that may offer terrestrial life conditions, and in 2115 the crew of the Foscolo the first interstellar vessel powered by a Foscolo Drive found planetary systems orbiting both the main and companion stars. Alpha Centauri is now the most densely populated star system outside of Sol.

Alpha Centauri A Orbit 3: Hesperus Class 2 Colony



Orbit Radius	0.7 au
Type	Arid
Density	1.10
Diameter	13573 km
Gravity	0.97 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.277
Composition	Oxygen/Nitrogen mix
Orbital period	358 days
Rotational period	23 hours

TEMPERATURE / SATELLITES

Polar	6°C
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WATER

Water	Oceans
% water	11
% ice	0
% clouds	50

MINERAL RESOURCES

Metal ore	11
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equatorial 34°C

Satellite 1

UNUSUAL FEATURES

Low humidity. Rugged terrain.

Radioactive ore 12

Precious metal 0

Raw crystal 29

Precious gems 4

Description:

An arid world with very low humidity, Hesperus is not an attractive planet, but in 2124 it became the location of the second ever extra-solar colony founded by the United Earth Federation. From orbit, the visitor immediately notices the innumerable mountain ranges and canyons criss-crossing the orange-brown surface like the many wrinkles on the face of an ancient man. Not much can grow on Hesperus, except in the valleys and terraced mountains that surround the planet's only ocean, and it is here that the colonial population of almost 1.5 million colonists are concentrated.

Hesperus has proved a more challenging and long term colonisation project than its terran neighbour Centauri Prime, but large deposits of raw crystals soon attracted corporate investment.

Alpha Centauri A Orbit 4: Centauri Prime Class 1 Colony



Orbit Radius 1.25 au

Type Terran

Density 1.10

Diameter 13356 km

Gravity 1.15 G



ATMOSPHERICS / ORBIT

Atmosphere Standard

Pressure 1.2

Composition Oxygen/Nitrogen mix

Orbital period 517 days

Rotational period 20 hours

WATER

Water Oceans

% water 81

% ice 3

% clouds 40

TEMPERATURE / SATELLITES

Polar -50°C

equatorial 30°C

Satellite 2

UNUSUAL FEATURES

Primitive lifeforms. High population.

MINERAL RESOURCES

Metal ore 36

Radioactive ore 41

Precious metal 11

Raw crystal 5

Precious gems 12

Description:

In 2121 the planet Alpha Centauri IV (or 'Centauri Prime' as it would become known) became the site of Earth's first extra-solar colony.

When word got out that the first manned mission to another star system had discovered an Earth-like planet with a well established ecosystem of primitive flora and fauna, it kickstarted what has since become known as the 'First Exodus' the first wave of rapid colonial expansion from Sol.

Deep deposits of metals, radioactive elements and raw crystals soon attracted heavy industry, and by the close of the 23rd Century, Centauri Prime has become a major industrial centre with a population of over 100 million. The planet has made the coalition of Corporations which financially backed the initial colonisation programme extremely rich.

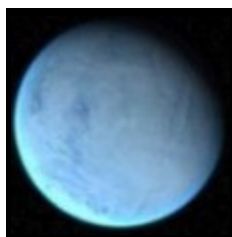
Unfortunately, this rapid growth came at a price. In a century and a half of colonisation, plants and animals imported from Earth, along with Earth bacteria, have caused an ecological disaster on Centauri Prime, marginalising virtually all of what was once a thriving alien ecosystem. Centauri Prime enjoys a healthy trade with the other two colonised planets in the star system, Helada and Hesperus.

NEW HORIZON, core rules 6.2 – volume 2

There are many stations in orbit around Centauri Prime, but the most famous is Aphrodite. This off-world resort, like the colony on the planet below, was funded and manufactured by a variety of corporations. Subsidiaries of Cenargo Corp terraformed the planet, Laing Construction manufactured the resort, and Artificial Life Inc supplied the personnel, 100% android.

Aphrodite restores the diminished, stimulates the jaded, and gratifies the insatiable. It's the ultimate environment for persons of financial merit who want to experience unprecedented bliss. As the advert line goes: Food was unworthy of the name until Aphrodite cuisine came along.

Alpha Centauri B Orbit 6: Helada Class 3 Colony



Orbit Radius	4 au
Type	Glacier
Density	0.81
Diameter	14603 km
Gravity	0.92 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.44
Composition	Carbon dioxide, trace elements
Orbital period	902 days
Rotational period	32 hours

TEMPERATURE / SATELLITES

Polar	-109°C
equatorial	-74°C
Satellite	1

UNUSUAL FEATURES

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WATER

Water	Glaciers
% water	2
% ice	98
% clouds	0

MINERAL RESOURCES

Metal ore	59
Radioactive ore	31
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Orbiting the dim orange companion star Alpha Centauri B, Helada is a cold, icy world with an atmosphere unsuitable to human life. The discovery of large deposits of metal and radioactive ores beneath the ice of Helada prompted Earth to fund the development of a terraforming and mining colony here. The capital, Buena Vista city houses over 250,000 colonists beneath it's sprawling domes.

PROCYON



Main Star	Procyon A
Type	F5 IV
Age	4.9 billion years
Distance from Sol	11.41 light years
Companion Star	Procyon B
Type	DA
Age	3.8 billion years
Orbit distance	14.9 au

Description:

Procyon A, or Alpha Canis Minoris A as it is also known, is a brilliant yellow-white star. With twice the diameter of the Sun, the star is also the largest star to Sol within 25 light years.

Alpha Canis Minoris A has a close companion star B that is separated by 14.9 astronomical units (AUs) of an orbital semi-major axis roughly the distance between Uranus and Sol, Procyon A has a system of 6 planets and an asteroid belt. The second planet, Tartarus, is just barely habitable, and supports several well-established mining colonies. The two outer planets are gas giants, one of which has a colony on one of it's moons.

Orbit 2: Tartarus Class 2 Colony



Orbit Radius	2.4 au
Type	Arid
Density	1.3
Diameter	10452 km
Gravity	1.5 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.3
Composition	Nitrogen/Oxygen mix
Orbital period	198 days
Rotational period	18 hours

WATER

Water	Small seas
% water	11
% ice	0
% clouds	14

TEMPERATURE / SATELLITES

Polar	8°C
equatorial	54°C
Satellite	2

MINERAL RESOURCES

Metal ore	62
Radioactive ore	23
Precious metal	23
Raw crystal	11
Precious gems	25

UNUSUAL FEATURES

Low humidity.

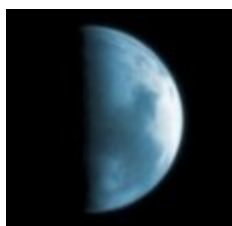
Description:

One of the richest mineral sources in the Core Systems is the second planet of the Procyon star system. After substantial terraforming, the atmosphere is just barely breathable and the temperature range tolerable for humans. Tartarus is a dry and bleak planet, scoured by hot winds and violent sandstorms, with sunlight at the equator dangerous to the unprotected human body.

Huge salaries offered by the various mining corporations have attracted many to this hellish world, and the majority of the 6.4 million population are employees of one mining corporation or another. The planet has only a minimal law enforcement presence, and as a result the place has become something of a refuge for those who are outcasts from more civilised worlds.

The main colony lies at the planet's north pole, with various mining camps scattered around the mineral rich equatorial regions.

Orbit 6: Jotun Class 3 Colony



Orbit Radius	11.2 au
Type	Ice Ball
Density	0.5
Diameter	3112 km
Gravity	0.4 G



ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0.67
Composition	Methane/Trace elements
Orbital period	43 days
Rotational period	11 hours

TEMPERATURE / SATELLITES

Polar	-273°C
equatorial	-180°C
Satellite	0

UNUSUAL FEATURES

Ice ball.

WATER

Water	Glaciers
% water	0
% ice	100
% clouds	0

MINERAL RESOURCES

Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

The outermost planet in the Procyon star system is a Jovian gas giant with over 30 moons. On one of the larger moons, an iceball named Jotun, is a small mining colony with a population of about 5000. Jotun is being mined for it's water ice, which is essential to the colony on Tartarus.

EPSILON INDI



Main Star	Epsilon Indi A
Type	K5 V
Age	1.5 billion years
Distance from Sol	11.83 light years
Companion Star	Epsilon Indi
Type	T1
Age	0.8 billion years
Orbit distance	1500 au

Description:

Epsilon Indi is an orange-red main sequence dwarf star of spectral and luminosity type K5V. It is orbited at a distance of 1500AU by a brown dwarf (Gliese 229a), and supports a system of 6 planets and an asteroid belt.

Epsilon Indi is like a distant cousin to Sol, with 77% of Sol's mass, 76% of its diameter, and about 14.7% of its luminosity. The star has a small system of planets and a companion brown dwarf. The brown dwarf orbits Epsilon Indi A at a distance of 1500 AU, and has a surface temperature of only around 1810K.

Orbit 1: Bedlam Class 3 Colony



Orbit Radius	0.14 au
Type	Hot House
Density	1.2
Diameter	13091 km
Gravity	1.63 G



ATMOSPHERICS / ORBIT

Atmosphere	Massive
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WATER

Water	None
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NEW HORIZON, core rules 6.2 – volume 2

Pressure	14.94
Composition	Carbon dioxyde
Orbital period	100 days
Rotational period	44 hours

TEMPERATURE / SATELLITES

Polar	98°C
equatorial	193°C
Satellite	2

UNUSUAL FEATURES

Cloud cover.

% water	0
% ice	0
% clouds	100

MINERAL RESOURCES

Metal ore	41
Radioactive ore	41
Precious metal	0
Raw crystal	0
Precious gems	12

Description:

Epsilon Indi I, or 'Bedlam' as it has become known, was so named due to the high number of breakdowns suffered among the employees of mining corporations who came to mine the planet's rich ore deposits.

A visitor to Bedlam can easily see why it has defeated so many: if the planet's volcanic mountain ranges, toxic atmosphere and sulfur bogs aren't enough, the visitor must also contend with high atmospheric pressure and temperatures approaching the boiling point of water. Anyone venturing outside the domed colony base at Bedlam's south pole on foot must do so wearing a powered work-suit, or be dead within seconds.

Orbit 2: Hallidon Class 2 Colony



Orbit Radius	0.32 au
Type	Steppe
Density	1.2
Diameter	11300 km
Gravity	1.06 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	0.69
Composition	Oxygen/Nitrogen mix
Orbital period	309 days
Rotational period	17 hours

TEMPERATURE / SATELLITES

Polar	-4°C
equatorial	28°C
Satellite	0

UNUSUAL FEATURES

High humidity.

WATER

Water	Oceans
% water	31
% ice	0
% clouds	54

MINERAL RESOURCES

Metal ore	68
Radioactive ore	10
Precious metal	0
Raw crystal	0
Precious gems	10

Description:

Though the biosphere of Epsilon Indi II, or Hallidon as it is now named, is superficially Earth-like, the early colonial survey teams soon found out that on a cellular level it was completely incompatible with Earth-life, containing almost no native flora which could be eaten without either providing zero nourishment or triggering a fatal anaphylactic reaction. The planet would require substantial ecological terraforming.

Hallidor Corporation is now reaping the rewards of such a long-term investment. Enough Earth flora and fauna have been successfully transplanted to Hallidon to give the planet a Class 2 rating. The population is steadily growing, currently estimated at 31.2 million, the majority of whom are Hallidor employees.

Hallidon recently became the main corporate headquarters for the Hallidor Corporation, the first corporation to move its main headquarters out of the Sol system, and it is soon to be the manufacturing centre for all Hallidor critical components.

LUYTEN'S STAR

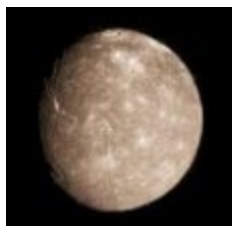


Main Star	Luyten's Star
Type	M3 V
Age	3.73 billion years
Distance from Sol	12.39 light years

Description:

Luyten's Star is a main sequence red dwarf star. The star lies just 1.2 light years away from Procyon, but it is not associated with it. The system possesses an asteroid belt rich in radioactive ore orbiting the star at a distance of 0.1 AU, and 2 planets, neither of which has an atmosphere. The innermost planet supports a domed mining colony base, financed by Praxis Mining.

Orbit 1: Luyten's Folly Class 3 Colony



Orbit Radius	0.41 au
Type	Rock
Density	0.8
Diameter	4288 km
Gravity	0.37 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	N/A
Orbital period	881 days
Rotational period	29 hours

TEMPERATURE / SATELLITES

Polar	-88°C
equatorial	-59°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice caps
% water	0
% ice	16
% clouds	0

MINERAL RESOURCES

Metal ore	25
Radioactive ore	1
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Luyten's Folly is an airless chunk of rock floating in space, but it is the location of the base of operations of Praxis Mining in the system, who are currently mining the asteroid belt for its large radioactive ore reserves. The domed colony has a population of approximately 10,000.

WOLF 359



Main Star	Wolf 359
Type	M5 V
Age	8.4 billion years
Distance from Sol	7.8 light years

Description:

A very cool dim, red dwarf star, the Wolff 359 system has one of the largest ICM bases outside of the three main MSF bases at Sol, Epsilon, Eridani and Hercules.

The Wolf 369 star system is also host to the Hales Penal Colony. Situated on an ice ball moon in orbit around one of the system's gas giants. Hades is where the UEF exiles it's worst criminals to work in the ice mines on the planet.

Orbit 2: Andersen Class 2 Colony



Orbit Radius	1.2 au
Type	Arid
Density	0.7
Diameter	15824 km
Gravity	0.87 G



ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	1.7
Composition	Oxygen/Nitrogen mix
Orbital period	490 days
Rotational period	18 hours

TEMPERATURE / SATELLITES

Polar	-98°C
equatorial	9°C
Satellite	1

UNUSUAL FEATURES

Low humidity.

WATER

Water	Ice caps
% water	15
% ice	18
% clouds	10

MINERAL RESOURCES

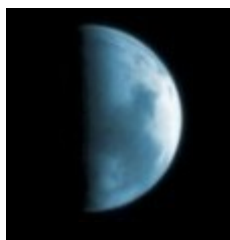
Metal ore	1
Radioactive ore	17
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

After 3 decades of terraforming, the planet Andersen has a thin but nonetheless breathable atmosphere and vaguely Earth-like geographic formations.

With its arid climate there is less than 20% free standing water on the planet – population growth has been slow but steady. It is the location of Fort APOCH ICM base and the home planet of Aerofighter Unlirimited, a company devoted to military aerospace craft manufacturing, and designer of many ICM craft.

Orbit 4: Hades Class 3 Colony



Orbit Radius	6.7 au
Type	Ice ball
Density	0.3
Diameter	5036 km
Gravity	0.17 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	98 days
Rotational period	35 hours

TEMPERATURE / SATELLITES

Polar	-273°C
equatorial	-273°C
Satellite	0

UNUSUAL FEATURES

No axial tilt.

WATER

Water	Ice
% water	0
% ice	100
% clouds	0

MINERAL RESOURCES

Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Hades is little more than a plain ball of frozen gases orbiting the gas giant Wolf 359 IV. It has no atmosphere and temperatures rarely arise above absolute zero during the day. The planet suffers frequently meteor storms, making the planets surface a dangerous place.

Hades is designated a prison planet. and is host to a maximum security penal work facility built by Hallidor Corp and maintained by the United Earth Federal Department of Corrections. Hades has a current inmate count of over 5000, most serving time for violent crimes. The prisoners mine the ice glaciers that make up the planet for shipping offworld by Hallidor Corp to supply those colonies for whom water is a precious commodity.

Ice mining on Hades is a dangerous business, as once outside the Domes of the colony, the prisoners work in complete vacuum. As if working in vacuum weren't perilous enough the prisoners must also contend with low gravity and the risk of suddenly meteor showers. A large percentage of inmates don't survive to serve out their sentence.

A large security force is maintained at the Hades Penal Colony, both on the ground at the colony base and in orbit at Warden-7 Space Station. The security force comprises mainly of units drawn elements of Hallidor Corp's own private security forces.

TAU CETI



Main Star	Tau Ceti
Type	G8 V
Age	3.2 billion years
Distance from Sol	11.9 light years

Description:

A main sequence, yellow-orange dwarf (G8 V) that may be as much as 10 billion years old. Tau yeti is the nearest, single, sun-like star to Sol. It has 81% of Sol's mass, 77% its diameter, but only 59% of its luminosity.

Tau Ceti was highly prized by the colonial powers during the First Exodus (2115-2135). The discovery of large deposits of metal and radioactive ore on the 3rd planet (Anjuna) caused an escalation in economic and political tensions between the United Americas and the Chinese Consortium over sovereign rights. These tensions eventually erupted into an open shooting war in the summer of 2138. The fighting lasted two years, and was mostly confined to the Tau yeti star system, especially the Jungles and swamps of the planet Anjuna.

Today, Tau yeti is a thriving industrial colony, and is also the location of Fort Powell, a large UEAF fleet base.

Orbit 3: Anjuna Class 2 Colony



Orbit Radius	0.68 au
Type	Jungle
Density	1.2
Diameter	11499 km
Gravity	1.08 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	0.77
Composition	Oxygen/Nitrogen mix
Orbital period	228 days
Rotational period	32 hours

TEMPERATURE / SATELLITES

Polar	-6°C
equatorial	39°C
Satellite	1

UNUSUAL FEATURES

Cloud cover; high humidity; primitive lifeforms.

WATER

Water	Oceans
% water	76
% ice	0
% clouds	78

MINERAL RESOURCES

Metal ore	67
Radioactive ore	39
Precious metal	0
Raw crystal	0
Precious gems	9

Description:

Despite this planet's troubled past, Anjuna has prospered under the ICA and now supports a well established colony with a population of over 63 million.

The majority of Anjuna's population lives in the northern hemisphere, in the uplands above the vast tracts of alien rainforests that dominate the planet's terrain. The jungles and swamps are teeming with alien flora and fauna, and research teams from the ICA and at least a dozen corporations are currently in the process of cataloging it all.

Anjuna also hides large deposits of metal ore, deep below the surface. Fusion mining is destroying large areas of forest and is attracting much attention from environmentalist groups.

The moon in orbit over Anjuna is home to Fort Powell, a UEAF fleet base.



SIRIUS



Main Star	Sirius A
Type	A0 V
Age	3.1 billion years
Distance from Sol	8.6 light years
Companion Star	Sirius B
Type	DA
Age	3.1 billion years
Orbit distance	19.8 au

Description:

Sirius A (or Alpha Canis Majoris A as it is also known) shines brilliantly and fiercely on the planets in orbit about it.

Although there is no official UEF colony established, the vast natural resources possessed by the third planet still draws a motley assortment of prospectors, pirates, scavengers and treasure seekers to the System.

Orbit 3: San Helena Class 3 Colony



Orbit Radius	1.4 au
Type	Hot House
Density	1.2
Diameter	15312 km
Gravity	1.44 G



ATMOSPHERICS / ORBIT

Atmosphere	Exotic
Pressure	4.6
Composition	Carbon dioxide/methane
Orbital period	301 days
Rotational period	14 hours

TEMPERATURE / SATELLITES

Polar	12°C
equatorial	54°C
Satellite	0

UNUSUAL FEATURES

Cloud cover.

WATER

Water	Trace
% water	9
% ice	0
% clouds	90

MINERAL RESOURCES

Metal ore	73
Radioactive ore	44
Precious metal	0
Raw crystal	0
Precious gems	14

Description:

Designated a 'Hot House' planet by the ICA, San Helena has a dense green house effect atmosphere made up primarily from carbon dioxide and methane, with other trace elements. It is also the site of a failed terraforming attempt by the Hallidor Corporation. Hallidor won the contract from the ICA to terraform the planet with the view to establishing a mining colony.

The volcanic mountain ranges, toxic atmosphere and sulfur bogs of San Helena defied terraforming, and after five decades of work with no real progress made, the project was abandoned in favor of the more pleasant planet Hallidon in the Epsilon Indi star system.

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Most of the important terraforming machinery was shipped to the planet Hallidon, but there is still one Atmosphere Processor still in operation here, which will eventually be being shut down for salvage by Hellidor Corp.

Since Hallidor abandoned the planet numerous mining companies have stepped in and established short-term mining bases on San Helena to effectively strip-mine the planet of its resources.

The planet has also become a draw for a motley assortment of prospectors, pirates, scavengers and treasure seekers all hoping to make a fast profit before the ICA eventually moves in to clean up the system.

Although there are no exact figures, it is estimated that the various bases on San Helena support a population of between 100-150,000.

ROSS 128

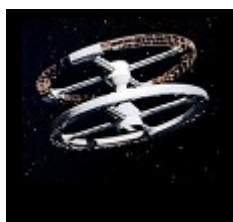


Main Star	Ross 128
Type	M4 V
Age	8.1 billion years
Distance from Sol	10.89 light years

Description:

A dim red dwarf, also known as Fl Vir, Ross 128 is a flare star, the stellar radiation given out during it.

Orbit 1: Icarus Outpost



Orbit Radius	0.1 au
Type	Station
Density	1
Diameter	5 km
Gravity	1 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1
Composition	Oxygen/Nitrogen mix
Orbital period	112 days
Rotational period	18 hours

TEMPERATURE / SATELLITES

Polar	18°C
equatorial	18°C
Satellite	0

UNUSUAL FEATURES

Artificial satellite.

WATER

Water	None
% water	0
% ice	0
% clouds	0

MINERAL RESOURCES

Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Icarus Solar Observatory is a research station owned by the Cenargo Corporation. It is in a tight orbit about Ross 128, (0.1 AU), investigating ways of harnessing the energy given out in solar flares. The station has a population of 100.

LALANDE 21185

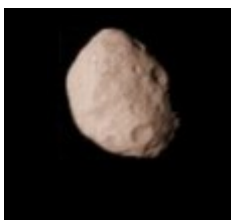


Main Star	Lalande 21185
Type	M2 V
Age	8.6 billion years
Distance from Sol	8.31 light years

Description:

This cool and dim red dwarf star is surrounded by a vast asteroid belt, called the Wagnerian Belt. Praxis Mining is involved in a small but profitable operation in this star system.

Orbit 1: Atlas Class 3 Colony



Orbit Radius	0.46 au
Type	Chunk
Density	0.3
Diameter	300 km
Gravity	0.1 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0.1
Composition	N/A
Orbital period	119 days
Rotational period	44 hours

TEMPERATURE / SATELLITES

Polar	-200°C
equatorial	-109°C
Satellite	0

UNUSUAL FEATURES

Asteroid; high radiation level; meteor storms

WATER

Water	Ice caps
% water	0
% ice	11
% clouds	0

MINERAL RESOURCES

Metal ore	5
Radioactive ore	23
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Atlas is a large asteroid with no atmosphere. Temperatures are very low and the radiation level is dangerously high for unprotected people. The Colony is a small one, composed of three domed and shielded communities with a total population of 12.000.

The communities are all on a single plateau, and are connected by a monorail system!; Dozens of small survey and mining craft operate out of Atlas, working in the system's vast asteroid field. These ships are specially shielded against radiation and the Crew work among the asteroids for 90 days before returning to Atlas for detoxification. The reason for all this dangerous and difficult work is the presence of complex radiation-stable hydrocarbons, which are used for medical research and genetic engineering.

LACAILLE 9352

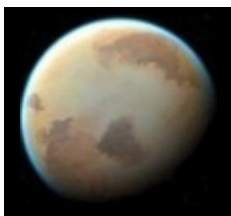


Main Star	Lacaille 9352
Type	M2 V
Age	8.4 billion years
Distance from Sol	1.73 light years

Description:

Lacaille 9352 is a dim red dwarf star, surrounded by a dust cloud and asteroid belt. Its close proximity to the thriving Epsilon Indi star system has turned Lacaille 9362 into something of a backwater.

Orbit 2: Exeter Class 3 Colony



Orbit Radius	2.9 au
Type	Desert
Density	0.8
Diameter	4912 km
Gravity	0.64 G



ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0.7
Composition	Carbon dioxide/Methane
Orbital period	18 days
Rotational period	10 hours

TEMPERATURE / SATELLITES

Polar	-140°C
equatorial	-49°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice caps
% water	0
% ice	6
% clouds	0

MINERAL RESOURCES

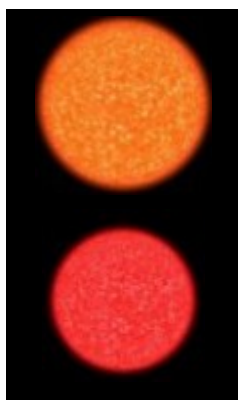
Metal ore	12
Radioactive ore	2
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Orbiting the system's only planet – a jovian gas giant, Exeter is a cold, windswept desert moon, dominated by large seas of frozen methane.

This small outpost has two enclosed communities of about 5,000 people each. It is primarily a service port, but most of its business has been taken from it by the facilities on Hallidon, and Exeter is rapidly declining in wealth and importance. Within a few years, only a few small mining operations which were the original purpose of the Colony will remain.

GROOMBRIDGE 34



Main Star	Groombridge 34 A
Type	K7 V
Age	4.5 billion years
Distance from Sol	11.64 light years
Companion Star	Groombridge 34 B
Type	M4 V
Age	3.9 billion years
Orbit distance	118 au

Description:

A binary star system, the orange dwarf star Groombridge 34 A has a system of 5 planets in addition to being orbited by the red dwarf star (Groombridge 34 B) at a distance of over 188 AU.

Groombridge 34 is home to a UEAF fleet logistics depot, located on the 2nd planet, a tundra world simply called Horizon.

Orbit 2: Groombridge Outpost/Class 2 Colony



Orbit Radius	0.8 au
Type	Tundra
Density	0.9
Diameter	13377 km
Gravity	0.94 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.08
Composition	Oxygen/Nitrogen mix
Orbital period	98 days
Rotational period	35 hours

TEMPERATURE / SATELLITES

Polar	-55°C
equatorial	6°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Oceans
% water	67
% ice	7
% clouds	19

MINERAL RESOURCES

Metal ore	11
Radioactive ore	2
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

The frost-covered tundra of Groombridge, despite needing only minimal terraforming, is a beautiful yet mineral-poor world.

Bypassed by the greedy megacorporations, Groombridge was settled in 2131, during the first wave of interstellar colonial expansion from Sol (the 'First Exodus'), by a group of private investors from Australia.

Receiving a steady flow of colonists from Earth, Groombridge still remained a relative backwater world until 20 years, when the ICM established a fleet logistics depot on the planet. Locals have mixed feelings about the presence of a UEF military base on their world.

EPSILON ERIDANI



Main Star	Epsilon Eridani
Type	K2 V
Age	1.2 billion years
Distance from Sol	10.5 light years

Description:

Somewhat smaller and cooler than our own Sun, Sol, Epsilon Eridani is also less luminous. This orange-red dwarf (K2 V) is a relative young star, but despite this it possesses a system of 6 planets and 1 asteroid belt. There are two well established colonies in this star system.

Orbit 2: Terra Nova Class 1 Colony



Orbit Radius	0.85 au
Type	Terran
Density	1
Diameter	8027 km
Gravity	0.9 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.1
Composition	Oxygen/Nitrogen mix
Orbital period	310 days
Rotational period	16 hours

TEMPERATURE / SATELLITES

Polar	-80°C
equatorial	17°C
Satellite	1

UNUSUAL FEATURES

Primitive lifeforms.

WATER

Water	Oceans
% water	71
% ice	10
% clouds	43

MINERAL RESOURCES

Metal ore	23
Radioactive ore	11
Precious metal	0
Raw crystal	0
Precious gems	8

Description:

Terra Nova is one of the richest planets in colonised space, in terms of the standard of living of the inhabitants. It is a nearly ideal world possessing an idyllic terran ecosystem, much like Earth must have been before humanity spread across the planet.

During the early stages of colonisation the consortium of corporations involved successfully pressured key individuals in the United Earth Federation Space Administration (UEFSA) to place restrictions on emigration to Terra Nova. Because of this, the planet has become a home for an exclusive group of the richest people in the United Earth Federation (UEF), retired politicians from Earth and wealthy stockholders from dozens of corporations have settled here with their families, and have lives of great ease.

It is noteworthy that the people who live on Terra Nova are not those who currently have power. They are people who have traded their power for simple wealth and who are now reaping the benefits of that decision. Terra Nova is also a popular holiday destination for Earth's uber-rich.

The majority of the resorts, wildlife parks and estates lie in the planet's lush southern hemisphere. There is little heavy industry on Terra Nova itself outside of that required to keep the resorts and private estates going. What there is lies in

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the northern hemisphere, and consists mostly of specialist agriculture, waste processing, recycling and light manufacturing.

Most of the heavy industry, well as the personnel necessary to operate that industry, have been consigned to several orbital stations, and the moons of the gas giant Epsilon Eridani c 'Malachite'.

Orbit 4: Anteros Class 3 Colony



Orbit Radius	3.9 au
Type	Rock
Density	0.7
Diameter	984 km
Gravity	0.5 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	None
Orbital period	22 days
Rotational period	14 hours

TEMPERATURE / SATELLITES

Polar	-200°C
equatorial	-78°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice caps
% water	0
% ice	11
% clouds	0

MINERAL RESOURCES

Metal ore	22
Radioactive ore	12
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

Anteros is the largest of fourteen moons orbiting the gas giant Malachite. Outside of Malachite's radiation belt and also geologically very stable, it is also the headquarters of all Circum-Malachite mining operations currently being carried out.

Colonists employed by a score of corporations work long hours mining both Malachite's atmosphere and the gas giant's bleak but resource-rich moons. When not working these colonists are consigned to one of several domed colonies on Anteros. The workers all dream of their ultimate goal: transfer to Terra Nova itself, and work very hard in pursuit of that dream.

BARNARD'S STAR



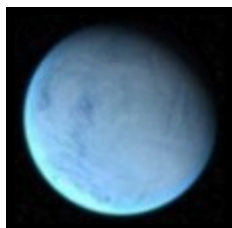
Main Star	Barnard's Star
Type	M4 V
Age	9.4 billion years
Distance from Sol	5.94 light years

Description:

A very cool and dim red dwarf star, Barnard's Star is the second closest to Sol after Proxima Centauri.

Even the closest planet to the star, an De Camp's World, is a frozen ball of ice, mined by several corporations for it's rare mineral deposits deep beneath the surface glaciers.

Orbit 1: Van De Camp's World Class 2 Colony



Orbit Radius	0.5 au
Type	Glacier
Density	0.82
Diameter	6112 km
Gravity	0.65 G



ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0.9
Composition	Oxygen/Carbon dioxide mix
Orbital period	112 days
Rotational period	14 hours

TEMPERATURE / SATELLITES

Polar	-90°C
equatorial	-12°C
Satellite	0

UNUSUAL FEATURES

Rare mineral deposits.

WATER

Water	Glaciers
% water	0
% ice	61
% clouds	15

MINERAL RESOURCES

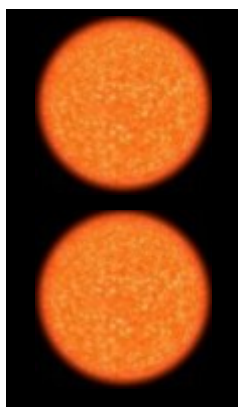
Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	32
Precious gems	18

Description:

The dim, ashen light from Barnard's Star only provides this icy, windswept planet with daylight akin to twilight on Earth. Temperatures rarely rise above freezing even in the warmer seasons, and month long blizzards are common place, but the presence of sizable mineral and crystal deposits beneath the icy surface of Van De Camps has attracted over 8 million colonists to settle on this planet.

Praxis Mining funded the colonisation of the planet, hoping to recoup its costs once the mining operations are in full swing.

61 CYGNI



Main Star	61 cygni A
Type	K5 V
Age	2.3 billion years
Distance from Sol	11.41 light years
Companion Star	61 Cygni B
Type	K7 V
Age	2.2 billion years
Orbit distance	86 au

Description:

This binary system of two orange dwarf stars are widely separated (86 AU) requiring about 700 years to orbit each other.

61 Cygni A supports a system of 4 planets with colonies on both the 2nd and 3rd planets.

Orbit 2: Tamir Class 2 Colony



Orbit Radius	0.8 au
Type	Arid
Density	1
Diameter	12054 km
Gravity	0.96 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	0.71
Composition	Oxygen/Nitrogen mix
Orbital period	275 days
Rotational period	21 hours

TEMPERATURE / SATELLITES

Polar	3°C
equatorial	37°C
Satellite	1

UNUSUAL FEATURES

High humidity.

WATER

Water	Oceans
% water	14
% ice	0
% clouds	36

MINERAL RESOURCES

Metal ore	30
Radioactive ore	12
Precious metal	0
Raw crystal	0
Precious gems	4

Description:

Birthplace of the Chrislam religion and location of the city of New Mecca. Once an unassuming colony with a high proportion of colonists from the European Federation and Islamic Holy Republic, Tamir is now the destination of pilgrims from all across the Federal Colonies. Its population has been known to increase to 12 million during the holy festivals.



Orbit 3: Ascension Class 2 Colony



Orbit Radius	0.8 au
Type	Steppe
Density	0.8
Diameter	16594 km
Gravity	1.04 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.5
Composition	Oxygen/Nitrogen mix
Orbital period	445 days
Rotational period	56 hours

TEMPERATURE / SATELLITES

Polar	-33°C
equatorial	9°C
Satellite	0

UNUSUAL FEATURES

High humidity.

WATER

Water	Oceans
% water	28
% ice	0
% clouds	43

MINERAL RESOURCES

Metal ore	16
Radioactive ore	18
Precious metal	0
Raw crystal	0
Precious gems	8

Description:

Ascension is a world of vast open grasslands, temperate seas and snowcapped mountain ranges. With no weather extremes and two long growing seasons per year, the planet is perfectly suited to intensive agriculture.

The Hallidor Corporation financed the colonisation of Ascension, and the planet's northern hemisphere is dominated by endless fields of genetically engineered crops. The majority of the 22.3 million population are Hallidor employees, ranging from Farm labourers to geneticists.

Agricultural colonies like Ascension are vital to sustaining the populations of less-hospitable non-agricultural worlds.

The Outer Colonies

A relatively resource rich region of space that separates the Core Systems from the Outer Rim, the Outer Colonies are mostly fertile areas of colonization, mining, and terraforming. While there are densely populated sectors within the Outer Colonies, there are also out of the way areas of no real value.

Officially designated Federated Colonies Zone 3, the region of space more commonly known as the Outer Colonies stretches from the outermost edge of the Core Systems to the edge of the Federal Colonies. This region is controlled by the United Earth Federation via the ICA. Within this region, the ICA has the authority to regulate the use of, and territorial claims to, any celestial body or region of space. The ICA currently recognises claims up to 1000km around a landing area. The ICA may offer colonisation contracts to nations and/or corporations to larger territorial regions than 1000km if it sees fit.

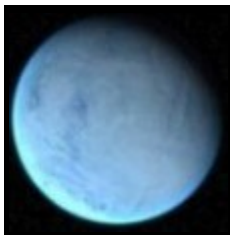
There are 29 UEF colonies in this region. Average journey time from Earth to the edge of the Outer Colonies takes just over 6 weeks. At the edge of the Outer Colonies, there are worlds still undergoing extensive terraforming, but most terrestrial worlds have well established colonies.

It is colonised by the most economically powerful member-states of the UEF: the United Americas, Chinese Consortium, European Federation, Japanese Affiliates and the Russian Republic, as well as several private organisations. All colonial ventures in this region are financially backed by one or more megacorporations.

The Outer Colonies Table

Star type		System	Orbit	Colony	Political block	Class	population	Distance from Sol
M/M	<div><div></div><div></div><div></div></div>	Kruger 60	2	Kruger II	<div><div></div></div>	2	2.8 million	13.07 LY
M	<div><div></div><div></div><div></div></div>	Wolf 1061	3	Redrock	<div><div></div></div>	3	10 000	13.91 LY
D	<div><div></div><div></div><div></div></div>	Van Maanen's Star	1	Ashkelon	<div><div></div></div>	3	1 000	14.37 LY
M	<div><div></div><div></div><div></div></div>	BD+68 946	1	Arclight	<div><div></div></div>	3	5 000	14.77 LY
M	<div><div></div><div></div><div></div></div>	Ross 780	1 1	Titleman's Rest Mirador	<div><div></div></div>	2 3	1.4 million 5 000	15.34 LY
K	<div><div></div><div></div><div></div></div>	Groombridge 1618	2	Horizon	<div><div></div></div>	2	3.4 million	15.89 LY
K/D	<div><div></div><div></div><div></div></div>	Omicron ² Eridani	1 2 6	Harvest Eridanus Terilon	<div><div></div><div></div><div></div></div>	2 outpost outpost	3.1 million 500 000 1 000	16.45 LY
K/K	<div><div></div><div></div><div></div></div>	70 Ophiuchi	1	Niobe	<div><div></div><div></div></div>	2	250 000	16.59 LY
A	<div><div></div><div></div><div></div></div>	Altair	2	Fuego	<div><div></div></div>	3	5 000	16.77 LY
M	<div><div></div><div></div><div></div></div>	G254-29	1	Yang-Sing	<div><div></div></div>	3	1 000	17.59 LY
M/D	<div><div></div><div></div><div></div></div>	Stein 2051	4	Oberon	<div><div></div></div>	3	2 000	17.98 LY
K	<div><div></div><div></div><div></div></div>	Sigma Draconis	2	Sacristia 181	<div><div></div></div>	2	25 000	18.81 LY
M	<div><div></div><div></div><div></div></div>	Ross 47	1	Guāi Lì	<div><div></div><div></div></div>	3	2 000	18.88 LY
K/M	<div><div></div><div></div><div></div></div>	Lalande 27173	2	Amber	<div><div></div></div>	2	450 000	19.26 LY
G/K	<div><div></div><div></div><div></div></div>	Eta Cassiopeiae	3 3	Sun Ji Hei Cassandra	<div><div></div><div></div></div>	3 1	5 000 115 000	19.42 LY
K	<div><div></div><div></div><div></div></div>	36 Ophiuchi C	2	Paragon	<div><div></div><div></div></div>	1	2.1 million	19.47 LY
K/K	<div><div></div><div></div><div></div></div>	36 Ophiuchi AB	3 3 5	Harmony Howard's Hope Newland	<div><div></div><div></div><div></div></div>	2 3 3	90 000 1 500 1 200	19.52 LY
M	<div><div></div><div></div><div></div></div>	CD-36 13940	5	Shinju 17	<div><div></div></div>	3	1 000	19.74 LY
G	<div><div></div><div></div><div></div></div>	82 Eridani	2	Aricebo	<div><div></div></div>	2	2.3 million	19.77 LY
G	<div><div></div><div></div><div></div></div>	Delta Pavonis	1 2 3	Inferno Kentaro's World Jewel	<div><div></div><div></div><div></div></div>	outpost 1 3	1 000 50 000 8 000	19.92 LY
M	<div><div></div><div></div><div></div></div>	Wolf 1481	1	CB-1184	<div><div></div></div>	3	1 000	19.95 LY

Orbit 2: Kruger II Class 2 Colony



Orbit Radius	0.3 au
Type	Glacier
Density	0.7
Diameter	14720 km
Gravity	0.81 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.161
Composition	Nitrogen/Oxygen
Orbital period	87 days
Rotational period	54 hours

TEMPERATURE / SATELLITES

Polar	-41°C
equatorial	3°C
Satellite	0

UNUSUAL FEATURES

Strong magnetic field.

WATER

Water	Ice sheets
% water	14
% ice	86
% clouds	6

MINERAL RESOURCES

Metal ore	52
Radioactive ore	17
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Large Gallium deposits beneath the wind-swept glaciers of Kruger II persuaded several major corporations to joint-fund a terraforming operation on this icy world.

Gallium has replaced silicon in the making of complex computer chips and competition for planets possessing rich deposits of this metal is fierce. Despite being partners in the terraforming and colonising of Kruger II, prospecting teams from the various corporations have been known to become embroiled in bitter and often violent feuds.

The FLEA presence on Kruger is minimal and its presence is rarely felt outside of the larger cities. As a result, lawlessness is rife in some of the more isolated mining camps.

WOLF 1061



Main Star	Wolf 1061
Type	M4 V red dwarf
Age	13.1 billion years
Distance from Sol	13.91 light years

Description:

Wolf 1061 is a star system consisting of a dim red dwarf star in the Outer Colonies. It is only about the size of Jupiter but supports a system of 3 planets and an extensive asteroid belt.

Orbit 3: Redrock Class 3 Colony



Orbit Radius	2.3 au
Type	Rock
Density	1.2
Diameter	10090 km
Gravity	0.95 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0.001
Composition	N/A
Orbital period	2615 days
Rotational period	60 hours

TEMPERATURE / SATELLITES

Polar	-225°C
equatorial	-200°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice sheets
% water	0
% ice	15
% clouds	0

MINERAL RESOURCES

Metal ore	67
Radioactive ore	39
Precious metal	0
Raw crystal	0
Precious gems	8

Description:

A ball of rock orbiting Wolf 1061, Redrock possesses large metal ore deposits and is currently being mined out by several corporations. The population of 10,000 dwell in three interconnected domed communities on the planet's bleak surface.

Wolf 1061 is too red in colour for Earth-type plant life to perform photosynthesis efficiently and as a result virtually all foodstuffs have to be imported from offworld.

VAN MAANEN'S STAR



Main Star	Van Maanen's Star
Type	DZ7 white dwarf
Age	10 billion years
Distance from Sol	14.37 light years

Description:

Van Maanen's Star is a star system consisting of a cool white dwarf star in the Outer Colonies.

The star is a stellar remnant of spectral and luminosity type DZ7. As a DZ white dwarf, it has a rich helium atmosphere. It is the closest white dwarf to Sol without a stellar companion and its relative coolness suggests that it is a very old star. It has about seven-tenths of Sol's mass, but with only about 1.3 percent of its diameter.

Three planets orbit the star, all balls of rock.

Orbit 1: Ashkelon Class 3 Colony



Orbit Radius	0.5 au
Type	Rock
Density	1.1
Diameter	4464 km
Gravity	0.31 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	N/A
Orbital period	259 days
Rotational period	40 hours

TEMPERATURE / SATELLITES

Polar	-256°C
equatorial	-47°C
Satellite	2

UNUSUAL FEATURES

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WATER

Water	Ice particles
% water	0
% ice	1
% clouds	0

MINERAL RESOURCES

Metal ore	23
Radioactive ore	1
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Ashkelon is completely lifeless. While there is evidence in the planet's crust to support that the planet once had a rich biological history, spanning billions of years, there is no evidence left on the surface.

Initially colonised to mine the rich deposits of frozen Helium-3 crystals, settlers soon discovered what have since become known as the Labyrinths. Whether the architects of this vast warren of tunnels and caverns that honeycomb the planet were intelligent, or whether they were formed by an as yet unknown natural phenomena has been a source of contention ever since they were discovered over 60 years ago.

BD+68 946



Main Star	BD+68 946
Type	M3 V red dwarf
Age	7 billion years
Distance from Sol	14.77 light years

Description:

BD+68 946 is a star system consisting of a bright red dwarf star in the Outer Colonies. The star, more commonly known as 'Beady' to Arclight colonists, was an orange dwarf until a few million years ago.

Orbit 1: Arclight Class 3 Colony



Orbit Radius	0.6 au
Type	Desert
Density	1.2
Diameter	11975 km
Gravity	1.13 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	0.989
Composition	Nitrogen/Oxygen
Orbital period	318 days
Rotational period	41 hours

TEMPERATURE / SATELLITES

Polar	-80°C
equatorial	-12°C
Satellite	1

UNUSUAL FEATURES

Violent storms.

WATER

Water	Ice sheets
% water	0
% ice	14
% clouds	0

MINERAL RESOURCES

Metal ore	51
Radioactive ore	41
Precious metal	0
Raw crystal	0
Precious gems	10

Description:

So named because of the violent electrical storms that plague this desert planet, Arclight is the site of a mining colony with a population of close to 5000.

The planet's equatorial mountain ranges hide vast deposits of radioactive ores, which are being aggressively mined 41 hours a day.

ROSS 780



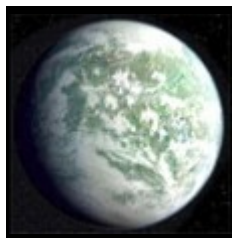
Main Star	Ross 780
Type	M5 V red dwarf
Age	7.2 billion years
Distance from Sol	15.34 light years

Description:

Ross 780 is a star system consisting of a fairly bright red dwarf star in the Outer Colonies. The star supports a system of planets. The nearest planet, a Jovian class gas giant, has colonies on two of its moons.



Orbit 1: Tittleman's Rest Class 2 Colony



Orbit Radius	0.21 au
Type	Tundra
Density	1.1
Diameter	12100 km
Gravity	1.01 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.128
Composition	Nitrogen/Oxygen
Orbital period	54 days
Rotational period	70 hours

TEMPERATURE / SATELLITES

Polar	-37°C
equatorial	11°C
Satellite	0

UNUSUAL FEATURES

Moon of Ross 780 IX.

WATER

Water	Oceans
% water	77
% ice	9
% clouds	19

MINERAL RESOURCES

Metal ore	71
Radioactive ore	36
Precious metal	0
Raw crystal	0
Precious gems	10

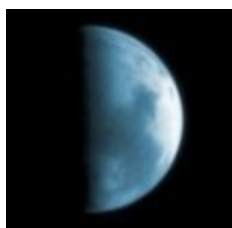
Description:

Dominated by snow-capped mountain ranges, evergreen forests and regions of cold, damp tundra, Tittleman's Rest is a cold temperate world, well suited to the growing of wheat and potato crops. The colony of almost 1.4 million is part-financed by Hallidor Corporation, one of the largest corporate investors in agricultural colonisation projects.

2141 – Marines assault hideout of Kow-Lang mercenary

Interstellar Colonial Marines are brought in to assault a fortified compound on Tittleman's Rest. The compound is the hideout of Tiberius Lee, ex-Commanding Officer of mercenary unit "the Star Tigers". He is charged with ordering the tactical nuclear strike during the Tau Ceti War that resulted in the deaths of almost 1200 civilian colonists at Kow-Lang on Anjuna. After a fierce battle lasting ten hours, Lee and his surviving followers are arrested.

Orbit 1: Mirador Class 3 Colony



Orbit Radius	0.12 au
Type	Ice Ball
Density	0.5
Diameter	9001 km
Gravity	0.35 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0.001
Composition	N/A
Orbital period	118 days
Rotational period	14 hours

WATER

Water	Glaciers
% water	0
% ice	100
% clouds	0

NEW HORIZON, core rules 6.2 – volume 2

TEMPERATURE / SATELLITES

Polar	-218°C
equatorial	-180°C
Satellite	0

UNUSUAL FEATURES

Moon of Ross 780 I.

MINERAL RESOURCES

Metal ore	6
Radioactive ore	1
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Nothing more than an airless chunk of ice orbiting Ross 780 I, Mirador is being mined for water ice for less hospitable worlds in the Outer Colonies. About 5000 workers from Tittleman's Rest are employed on month long shifts. The work is dangerous and hard, but the pay is high.

GROOMBRIDGE 1618



Main Star	Groombridge 1618
Type	K7 V orange dwarf
Age	2.9 billion years
Distance from Sol	15.89 light years

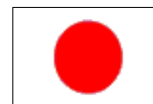
Description:

Groombridge 1618 is a star system consisting of an orange dwarf star in the Outer Colonies. The star supports a system of 7 planets, the second supporting a large colony.

Orbit 2: Horizon Class 2 Colony



Orbit Radius	0.8 au
Type	Ocean
Density	0.9
Diameter	10412 km
Gravity	1.12 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.4
Composition	Nitrogen/Oxygen
Orbital period	274 days
Rotational period	20 hours

TEMPERATURE / SATELLITES

Polar	-44°C
equatorial	38°C
Satellite	3

UNUSUAL FEATURES

Primitive life forms.

WATER

Water	Oceans
% water	90
% ice	12
% clouds	22

MINERAL RESOURCES

Metal ore	22
Radioactive ore	18
Precious metal	0
Raw crystal	0
Precious gems	3

Description:

With 90% of its surface covered in water, Horizon is a planet of vast oceans dotted with chains of tropical archipelago around its equator.

Horizon's oceans team with marine life, including a species similar to krill, only larger, that is farmed, along with other edible fish species in the vast sea-farms that are scattered across the planet's oceans. The majority of the Japanese colonial population are employed in the sea farming industry.

Horizon is becoming a popular destination for rich holiday makers from Earth, especially among adrenaline junkies – surfers who come to ride the waves caused by the orbital motion of the planet's three moons.

OMICRON² ERIDANI



Main Star	Omicron ² Eridani A
Type	K1 V orange dwarf
Age	3.1 billion years
Distance from Sol	16.45 light years
Companion Star	Omicron ² Eridani B
Type	DA white dwarf
Age	5.2 billion years
Distance orbit	418 AU

Description:

Omicron² Eridani, also called 40 Eridani, is a relatively young binary star system consisting of an orange-red dwarf and a white dwarf in the Outer Colonies. Stars A and B have a wide separation of about 418 AUs and an orbital period of some 8,000 years.

Any planets around Omicron² Eridani B would have been "fried" through heat and hard radiation long ago when star B was a giant star and puffed out its outer layers to reveal its remnant stellar core as a white dwarf. For Star B, the current water zone is centred around 0.06 AU which would require an orbital period of about 7.8 days!

Omicron² Eridani A supports a system of 6 planets. There are colonies on two planets, and on a moon orbiting one of the two outer gas giants.

Omicron² Eridani is also the location of MSF Eridani, one of the largest concentrations of UEF military in the Outer Colonies.

Orbit 1: Harvest Class 2 Colony



Orbit Radius	0.6 au
Type	Steppes
Density	1.0
Diameter	16145 km
Gravity	1.07 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.25
Composition	Nitrogen/Oxygen
Orbital period	203 days
Rotational period	35 hours

TEMPERATURE / SATELLITES

Polar	-5°C
equatorial	43°C
Satellite	1

WATER

Water	Oceans
% water	25
% ice	0
% clouds	61

MINERAL RESOURCES

Metal ore	64
Radioactive ore	40
Precious metal	0

UNUSUAL FEATURES

Raw crystal	0
Precious gems	12

Description:

A fertile planet of vast semi-arid, grass-covered plains and forests, with two small oceans, Harvest was colonised by the Chinese Consortium several decades ago with the backing of the Cheung Corporation.

Harvest is designated an agricultural world and much of its colonial population is employed in this industry. Intensive cultivation of genetically engineered crops provides food for export to colony worlds unable to grow their own.

Orbit 2: Eridanus Outpost



Orbit Radius	0.69 au
Type	Arid
Density	0.8
Diameter	12822 km
Gravity	0.83 G



ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0.81
Composition	Nitrogen/Oxygen
Orbital period	283 days
Rotational period	22 hours

WATER

Water	Lakes and rivers
% water	12
% ice	4
% clouds	35

TEMPERATURE / SATELLITES

Polar	-47°C
equatorial	13°C
Satellite	3

MINERAL RESOURCES

Metal ore	37
Radioactive ore	20
Precious metal	0
Raw crystal	0
Precious gems	6

UNUSUAL FEATURES

High radiation level; Primitive life forms.

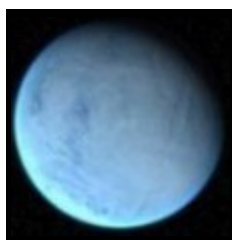
Description:

A small, arid world at the outer edge of the planetary comfort zone around Omicron² Eridani A, the surface of Eridanus is dominated by jagged mountain ranges, open plains of cold semi-desert and deep chasm-like valleys. Almost all of the free-standing liquid water is located at the bottom of these deep chasms, kept from freezing by geothermal activity.

Eridanus is the location of one of the largest UEAF bases in the Outer Colonies – New Damascus – home to Marine Space Force Eridani. In addition to several installations on the planet surface, there is also a large subterranean fortress nicknamed 'The Citadel' and a large orbital facility, which is home-base of the UEAF 8th Fleet under Admiral Ramsey.

Eridanus is home to over 40,000 military personnel.

Orbit 6: Terilon Outpost



Orbit Radius	15.9 au
Type	Glacier
Density	1.0
Diameter	16558 km
Gravity	1.3 G



ATMOSPHERICS / ORBIT

WATER

NEW HORIZON, core rules 6.2 – volume 2

Atmosphere	Dense
0	4.8
100	Nitrogen/Oxygen
1	705 days
Rotational period	14 hours

TEMPERATURE / SATELLITES

Polar	-198°C
equatorial	-98°C
Satellite	1

UNUSUAL FEATURES

Meteor storms.

Water	Glaciers
% water	0
% ice	100
% clouds	1

MINERAL RESOURCES

Metal ore	63
Radioactive ore	41
Precious metal	0
Raw crystal	0
Precious gems	14

Description:

One of the many moons orbiting the Neptune class gas giant Ripple, Terilon is an inhospitable, glacier world plagued by frequent meteor storms, making the planet's southern hemisphere a dangerous place to be. It is also the location of the Trinity Testing Facility, utilised by the Military Sciences Division to test new weapons and other technology with military applications.

70 OPHIUCHI



Main Star	70 Ophiuchi A
Type	K0 V orange dwarf
Age	5.6 billion years
Distance from Sol	16.59 light years
Companion Star	70 Ophiuchi B
Type	K5 V orange dwarf
Age	5.6 billion years
Distance orbit	23 AU

Description:

70 Ophiuchi is a binary star system consisting of two orange main sequence stars in the Outer Colonies.

70 Ophiuchi A has a system of two terrestrial planets and an asteroid belt, while 70 Ophiuchi B is orbited by a dense asteroid belt. The first planet orbiting 70 Ophiuchi A supports a colony and is the location of the largest orbital military drydock outside of the Core Systems.

Orbit 1: Niobe Class 2 Colony



Orbit Radius	0.68 au
Type	Arid
Density	0.9
Diameter	8612 km
Gravity	0.78 G



ATMOSPHERICS / ORBIT

Atmosphere	Thin
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WATER

Water	Lakes and rivers
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NEW HORIZON, core rules 6.2 – volume 2

Pressure	0.8
Composition	Nitrogen/Oxygen
Orbital period	228 days
Rotational period	18 hours

TEMPERATURE / SATELLITES

Polar	4°C
equatorial	56°C
Satellite	2

UNUSUAL FEATURES

Low humidity.

% water	18
% ice	0
% clouds	4

MINERAL RESOURCES

Metal ore	32
Radioactive ore	18
Precious metal	0
Raw crystal	0
Precious gems	4

Description:

A dry arid world that escapes most of the savage meteor showers that pummel the other planet orbiting 70 Ophiuchi A, Niobe is the location of a relatively small surface colony, joint-funded by the United Americas and the Chinese Consortium. It would be just another frontier mining colony, were it not for the fact that the planet is also the location of the largest orbital military drydock outside of the Core Systems.

The drydock was built by EnerTek prior to that corporation's collapse in 2246, and was commandeered by the UEAF at the start of the Colonial Wars as an emergency repair base for damaged ships returning from the Herculis Front.

The UEAF now maintains a sizeable garrison on and in orbit of Niobe, numbering over 30,000 personnel, including a colonial marines rapid reaction force. The main ICM base is located on the surface of the planet, at Fort Walawag.

ALTAIR



Main Star	Altair
Type	A7 VI white dwarf
Age	0.4 billion years
Distance from Sol	16.77 light years

Description:

Altair is a star system consisting of a white main sequence star in the Outer Colonies. The star supports a system of 7 planets, the second supporting a large colony.

The star has about 10.7 times the visual luminosity of Sol. Although the star is only a few hundred million years old, it is so much bigger and hotter than Sol that it will exhaust its core hydrogen around only a billion years and turn into a red giant or Cepheid variable before puffing away its outer layers to reveal a remnant core as a white dwarf.

Like Sirius, Altair radiates much more in ultraviolet wavelengths than Sol. Altair is orbited by a gas cloud and two terrestrial planets. The second planet is colonised.

Orbit 2: Fuego Class 3 Colony



Orbit Radius	2.9 au
Type	Desert
Density	1.07
Diameter	13460 km
Gravity	1.12 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	1.2

WATER

Water	Lakes and rivers
% water	9

NEW HORIZON, core rules 6.2 – volume 2

Composition	Carbon dioxide
Orbital period	1740 days
Rotational period	19 hours

TEMPERATURE / SATELLITES

Polar	22°C
equatorial	75°C
Satellite	3

UNUSUAL FEATURES

Microbes.

% ice	0
% clouds	0

MINERAL RESOURCES

Metal ore	70
Radioactive ore	41
Precious metal	0
Raw crystal	0
Precious gems	10

Description:

The inner planet of Altair is incapable of sustaining life and has no appreciable worth to inspire any corporation to attempt to change this situation. However, 2.9 AUs from the star is Fuego, a desert planet. With an orbital period of about 4.4 Earth years, Fuego might seem harsh and inhospitable, but life has evolved here, albeit in a simple, rudimentary form: primitive single-cell, anaerobic bacteria. Under constant bombardment by meteorites and the hard ultraviolet radiation from Altair, it is unfair to expect much more.

Fuego is the location of a penal mining colony, established by the UEF over a century ago, and financed by EnerTek Corporation. When EnerTek went bust in 2246, Hallidor Corporation inherited the installation by buying up the defunct EnerTek's colonial assets. Hallidor has been winding down operations on Fuego for the past 10 years, with the intention of cannibalising as much kit from the site as possible and dispersing the remaining inmates to other penal colonies in the Federal Colonies. The penal colony inhabitants receive supplies and replacement mechanical parts from Hallidor on an annual basis. Beyond this contact (which usually lasts a week while the crew of the supply ship unload from orbit and recharge their F-Drive) they are left to their own devices.

G254 29



Main Star	G254 29
Type	M4 V red dwarf
Age	4.6 billion years
Distance from Sol	17.59 light years

Description:

G254-29 is a star system consisting of a dim red dwarf in the Outer Colonies. This cool star has about half of Sol's mass and size. It is orbited by a system of 3 planets, one terrestrial and two gas giants. The terrestrial planet circles the star in a tight orbit and is colonised.

Orbit 1: Yang-Sing Class 3 Colony



Orbit Radius	0.44 au
Type	Desert
Density	1.1
Diameter	7807 km
Gravity	0.55 G



ATMOSPHERICS / ORBIT

Atmosphere	Very thin
Pressure	0.23
Composition	Carbon dioxide
Orbital period	47 days

WATER

Water	Ice sheets
% water	0
% ice	1
% clouds	0

Rotational period	1128 hours
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TEMPERATURE / SATELLITES

Polar	-33°C
equatorial	18°C
Satellite	0

UNUSUAL FEATURES

Tidally locked.

MINERAL RESOURCES

Metal ore	12
Radioactive ore	79
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Circling G254-29 in such a tight orbit, the rotation of Yang-Sing is tidally locked with the star so that one side has perpetual daylight with the other in darkness.

Approximately 1000 Chinese Consortium colonists, employees of a Cheung Corp mining subsidiary, live in a domed community close to the planet's north pole. Here, the skies are perpetually twilight.

STEIN 2051



Main Star	Stein 2051 A
Type	M4 V red dwarf
Age	4.1 billion years
Distance from Sol	17.98 light years
Companion Star	Stein 2051 B
Type	DC5 white dwarf
Age	3.1 billion years
Distance orbit	39 AU

Description:

Stein 2051 is a binary star system consisting of a red dwarf and a white dwarf in the Outer Colonies.

Stein 2051 A is orbited by a vast asteroid field, over 2AU deep. Its white dwarf companion star orbits beyond the limits of the field.

Orbit 4: Oberon Class 3 Colony



Orbit Radius	1.4 au
Type	Chunk
Density	0.9
Diameter	801 km
Gravity	0.06 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	N/A
Orbital period	0 days
Rotational period	0 hours

TEMPERATURE / SATELLITES

Polar	-273°C
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WATER

Water	None
% water	0
% ice	1
% clouds	0

MINERAL RESOURCES

Metal ore	12
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equatorial 130°C

Satellite 0

UNUSUAL FEATURES

Radioactive ore 1

Precious metal 0

Raw crystal 0

Precious gems 1

Description:

Oberon is a bleak rocky planetoid that serves as a base for exploring vast asteroid fields of Stein 2051. A European venture, backed by Proxima Incorporated and Cenargo, established a colony base on Oberon over 20 years ago. The structure is partially on the surface, partially subterranean and is home to some 2000 colonists.

SIGMA DRACONIS



Main Star Sigma Draconis

Type M4 V red dwarf

Age 4.2 billion years

Distance from Sol 18.81 light years

Description:

Sigma Draconis is a star system consisting of an orange-red dwarf in the Outer Colonies. The star has about 89 percent of Sol's mass, 79 percent of its diameter, and 39 percent of its luminosity.

Sigma Draconis is orbited by a system of 3 planets and an asteroid belt. Of the two terrestrial planets, one supports a colony.

Orbit 2: Sacristia 181 Class 2 Colony



Orbit Radius 0.62 au

Type Steppes

Density 0.9

Diameter 14047 km

Gravity 0.99 G



ATMOSPHERICS / ORBIT

Atmosphere Standard

Pressure 1.45

Composition Nitrogen/Oxygen

Orbital period 199 days

Rotational period 13 hours

TEMPERATURE / SATELLITES

Polar -40°C

equatorial 34°C

Satellite 2

UNUSUAL FEATURES

Primitive life forms.

WATER

Water Oceans

% water 20

% ice 1

% clouds 57

MINERAL RESOURCES

Metal ore 21

Radioactive ore 9

Precious metal 0

Raw crystal 0

Precious gems 9

Description:

Sacristia 181 is named in memory of the Sacristia tragedy of 2218, when the colony ship Sacristia was lost with all 181 crew, after its onboard computer systems failed during orbital insertion.

Today, the planet supports a growing United Americas agricultural colony, with a population of almost 25,000.

ROSS 47



Main Star	Ross 47
Type	M4 IV red sub-giant
Age	2.22 billion years
Distance from Sol	18.88 light years

Description:

Ross 47 is a star system consisting of red sub-giant star in the Outer Colonies. In another 100,000 years it will expand to engulf the innermost of the planets that lie in orbit.

Of the six planets orbiting Ross 47, four are terrestrial. The terrestrial planet closest to the star supports a small colony.

Orbit 1: Guāi Lì Class 3 Colony



Orbit Radius	0.31 au
Type	Hot house
Density	1.2
Diameter	7085 km
Gravity	0.67 G



ATMOSPHERICS / ORBIT

Atmosphere	Exotic
Pressure	3.8
Composition	Carbon dioxide
Orbital period	156 days
Rotational period	21 hours

TEMPERATURE / SATELLITES

Polar	84°C
equatorial	266°C
Satellite	0

UNUSUAL FEATURES

Cloud cover.	
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WATER

Water	None
% water	0
% ice	0
% clouds	100

MINERAL RESOURCES

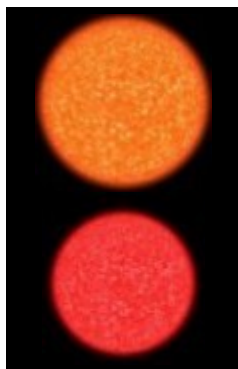
Metal ore	73
Radioactive ore	43
Precious metal	0
Raw crystal	0
Precious gems	16

Description:

Designated a 'hot house' planet, Guāi Lì (translated roughly as 'Unfriendly Place') is a world which has a history of life, but which has since developed a runaway greenhouse effect. Similar to Venus, what life existed here is now extinct.

Guāi Lì is the location of a Sino-Russian mining colony, population 2,500. They dwell in a domed community close to the planet's southern polar regions. There is a large open cast mining base here run by Proxima Incorporated. The corporation also maintains an orbital facility which serves as a refuelling depot for craft bound for the Frontier.

LALANDE 27173

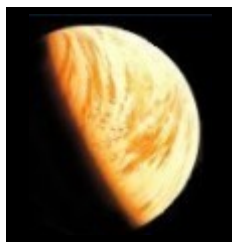


Main Star	Lalande 27173 A
Type	K5 V orange dwarf
Age	1.5 billion years
Distance from Sol	19.26 light years
Companion Star	Lalande 27173 B
Type	M1 V red dwarf
Age	1.9 billion years
Distance orbit	130 AU

Description:

Lalande 27173 is a binary star system consisting of an orange dwarf and a dim red dwarf in the Outer Colonies. Lalande 27173 A has roughly the same diameter and luminosity as Sol, and a system of 4 planets, 2 of which are terrestrial. One of these supports a colony.

Orbit 2: Amber Class 2 Colony



Orbit Radius	0.42 au
Type	Arid
Density	0.9
Diameter	15521 km
Gravity	0.8 G



ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0.9
Composition	Nitrogen/Oxygen
Orbital period	168 days
Rotational period	18 hours

TEMPERATURE / SATELLITES

Polar	-2°C
equatorial	46°C
Satellite	2

UNUSUAL FEATURES

Low humidity; Primitive life forms.

WATER

Water	Oceans
% water	19
% ice	0
% clouds	54

MINERAL RESOURCES

Metal ore	33
Radioactive ore	25
Precious metal	0
Raw crystal	0
Precious gems	9

Description:

Amber is a small arid world with topography much like North Africa on Earth. It supports a colony funded by the European Federation and the Church of Chrislam. The majority of the 450,000 colonists eking out a living on this marginal world, if not European are of North African descent.

Amber is also the birthplace of Gabriel Abdul-Samaad, also known as Gabriel Dhul Fiquaar ('The Prophets Sword'), leader of the Husaam Udeen ('Swords of the Faith') Martyrs. The Husaam Udeen Martyrs are an extremist Chrislamic Sect who believe that the ICA and megacorporations are inherently corrupt and must be prevented from raping every planet they colonise.

ETA CASSIOPEIAE



Main Star	Eta Cassiopeiae A
Type	G0 V yellow dwarf
Age	4.1 billion years
Distance from Sol	19.42 light years
Companion Star	Eta Cassiopeiae B
Type	K7 V orange dwarf
Age	1.8 billion years
Distance orbit	71 AU

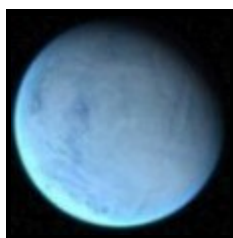
Description:

Eta Cassiopeiae is a binary star system, also called Achird, consisting of a yellow-orange dwarf and an orange-red dwarf in the Outer Colonies.

Eta Cassiopeiae A is a primary with 91% of Sol's mass, almost the same diameter (101%) and 1.2 times its luminosity. Eta Cassiopeiae B is cooler and dimmer, with 60% of Sol's mass and diameter and around 3% of its luminosity.

Both stars have planetary systems (4 orbiting Eta Cassiopeiae A and 3 orbiting Eta Cassiopeiae B) and there is a colony in each system.

Orbit 3: Sun Ji Hei Class 3 Colony



Orbit Radius	0.98 au
Type	Glacier
Density	0.9
Diameter	14121 km
Gravity	1.0 G



ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0.86
Composition	Nitrogen/Oxygen
Orbital period	58 days
Rotational period	87 hours

TEMPERATURE / SATELLITES

Polar	-78°C
equatorial	-53°C
Satellite	2

UNUSUAL FEATURES

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WATER

Water	Glaciers
% water	0
% ice	100
% clouds	0

MINERAL RESOURCES

Metal ore	42
Radioactive ore	9
Precious metal	0
Raw crystal	0
Precious gems	4

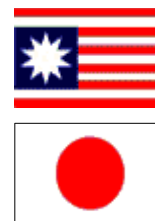
Description:

A frozen world of vast ice fields and towering glaciers, Sun Ji Hei is the location of a small Chinese Consortium mining colony.

Orbit 3: Cassandra Class 1 Colony



Orbit Radius	1.13 au
Type	Terran
Density	1.0
Diameter	12160 km
Gravity	0.95 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	0.75
Composition	Nitrogen/Oxygen
Orbital period	315 days
Rotational period	18 hours

TEMPERATURE / SATELLITES

Polar	-34°C
equatorial	27°C
Satellite	0

UNUSUAL FEATURES

Primitive life forms.

WATER

Water	Oceans
% water	67
% ice	1
% clouds	58

MINERAL RESOURCES

Metal ore	33
Radioactive ore	18
Precious metal	0
Raw crystal	0
Precious gems	6

Description:

The planet Cassandra is a Terran world, designated a class 1 colony world by the ICA. It is a world of stunning natural beauty, supporting an indigenous ecology of primitive native life forms (amphibians, ferns, polyps, plants etc). Having no natural satellite of its own to produce tidal motion, the oceans of Cassandra are extremely calm.

Cassandra supports a fledgling Anglo-Japanese colony, funded by a Hallidor Corporation/Motokatsu-Kyono Combine joint venture. There are approximately 115,000 colonists on Cassandra so far, but the ICA has been inundated with applications for emigration to this world from the Core Systems.

There is still a lot of work to do to make Cassandra a fully self sufficient colony, but once it is done, this world holds the promise of becoming a one of the richest self-sufficient colonies in the Outer Colonies.

36 OPHIUCHI C



Main Star	36 Ophiuchi C
Type	K5 V orange dwarf
Age	1.8 billion years
Distance from Sol	19.47 light years

Description:

36 Ophiuchi C is a star system consisting of orange-red dwarf star in the Outer Colonies.

The star has only about 71% of Sol's mass and diameter and about 8.7% of its luminosity. It orbits the 36 Ophiuchi AB pair at around 4400 AU away and is a variable star. A fast spacecraft using realspace propulsion could make the journey from 36 Ophiuchi C to 36 Ophiuchi AB in about 2 years at maximum thrust. Using F-Drive, this journey can be made in just over 2 hours, Earth Standard Time.

Four planets and an asteroid belt orbit this star. There is a colony on the second planet, Paragon.

Orbit 2: Paragon Class 1 Colony



Orbit Radius	0.35 au
Type	Terran
Density	0.9
Diameter	16726 km
Gravity	0.97 G



ATMOSPHERICS / ORBIT

Atmosphere	Standard
Pressure	0.98
Composition	Nitrogen/Oxygen
Orbital period	171 days
Rotational period	22 hours

TEMPERATURE / SATELLITES

Polar	-40°C
equatorial	33°C
Satellite	0

UNUSUAL FEATURES

Native semi-intelligent life forms.

WATER

Water	Oceans
% water	79
% ice	1
% clouds	55

MINERAL RESOURCES

Metal ore	17
Radioactive ore	18
Precious metal	40
Raw crystal	0
Precious gems	11

Description:

Paragon is a Terran world of extraordinary natural beauty that supports a fast-growing Sino-American colony already over sixty years old and with a population approaching 2.1 million. There are three major landmasses and numerous small island archipelagos. The majority of the colonial population have settled on the two largest continents: Landfall and the North East Territories. The largest population centres are Paragon City, New Shanghai and Xuan. The rest of the colonial population is spread out among numerous smaller settlements.

Paragon has no natural satellites and an axial inclination of only 6 degrees, much smaller than compared with the 23 degrees inclination of Earth. Such a minor axial inclination means that the planet lacks substantial seasonal variations in climate. As a result there are more incidences of disease, moulds and fungus, which cause the life-cycle of the native plant life to be much shorter than Earth.

The jungles and rainforests that dominate Paragon look very much like the jungles and rainforests of Earth. The ground is very dark and sparsely foliated, tall stems stretch up to the canopy, the canopy itself is way up above the ground blocking out the light. Competition is really fierce for light. The main difference comes in the turn around of plant life, a jungle tree may last 50, 100, or more years. On Paragon the dominant plants only last a year or two, hence they need to grow fast. Plants grow up the corpses of the previous victim, using them for support. The 'tree' analogues are quite twisty and vine like threaded round and over a lattice of dead 'wood'.

Notable Locations:

- Paragon City, Paragon's capital and home to half a million colonists, located on Landfall.
- New Shanghai, a city with a quarter of a million inhabitants, located on Landfall.
- Tien-Son, a small city in the North Eastern Territories.
- Xuan, a city with a population of quarter of a million, located in the North Eastern Territories.

History:

2196 Discovery

First visit by ICA scoutships to the 36 Ophuichi C star system. When the terran world 36 Ophuichi II (Paragon) is discovered, a priority colonial survey is immediately begun. When a potential Class One Colony World is discovered, the planet is quarantined by the ICA so that its biosphere can be surveyed in minute detail, firstly to ascertain that there is no inherent danger to prospective colonists, and secondly that the introduction of Earth-life will not have any serious ecological impact.

2207 Class One Colony World status

36 Ophiuchi II is given Class One Colony World status by the ICA. Colonial contracts for colonisation are issued. The intention is that the colony will become a mixed industrial/agricultural world, capable of self-sufficiency within a generation.

2209 Paragon is colonised

A Sino-American consortium wins the colonisation contract for 36 Ophiuchi II, now named Paragon. Colonial transports land on the continent dubbed 'Landfall'. They quickly set up colony bases. The colonial settlement receives substantial financial backing from Chinese and American megacorps including Cheung Corp and Hallidor Corporation.

2271 ICM begins interdiction on separatists

The Interstellar Colonial Marines start a military interdiction on separatists groups living on Paragon. There has been trouble ever since the end of the Colonial Wars, when some of the colonists began protesting at Earth control and the amount of tax revenue funnelled off-world by the corporations and ICA, on top of the heavy import duties paid on luxury items shipped to the colony from the Core Systems.

36 OPHIUCHI AB



Main Star	36 Ophiuchi A
Type	K1 V orange dwarf
Age	2.7 billion years
Distance from Sol	19.52 light years
Companion Star	36 Ophiuchi B
Type	K1 V orange dwarf
Age	2.1 billion years
Distance orbit	83 AU

Description:

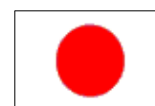
36 Ophiuchi AB is a binary star system consisting of two orange-red dwarfs in the Outer Colonies.

These stars have about 85% of Sol's mass and diameter and 28% of its luminosity. Separated from each other by a highly eccentric orbit that takes approximately 570 years and fluctuates between 83-169AU, both stars support a small system of planets. There are colony worlds orbiting both of the stars.

Orbit 3: Harmony Class 2 Colony



Orbit Radius	0.74 au
Type	Tundra
Density	1.1
Diameter	14686 km
Gravity	1.27 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	1.8
Composition	Nitrogen/Oxygen
Orbital period	295 days
Rotational period	21 hours

TEMPERATURE / SATELLITES

WATER

Water	Oceans
% water	59
% ice	6
% clouds	29

MINERAL RESOURCES

NEW HORIZON, core rules 6.2 – volume 2

Polar	-36°C
equatorial	4°C
Satellite	0
UNUSUAL FEATURES	
High humidity.	

Metal ore	29
Radioactive ore	42
Precious metal	0
Raw crystal	0
Precious gems	13

Description:

A cold and damp tundra world requiring only minor atmospheric terraforming, Harmony is the site of a joint European-Japanese colonisation project which is into its third decade. It supports a population of almost 90,000 and a fledgling industrial economy.

Harmony has a large orbital facility built by Cenargo Corporation and Motokatsu-Kyono Combine, the primary corporate investors who funded the colonisation process. Harmony Station is used as a safe refuelling point by colonial shipping headed out to the Herculis Cluster fringe, known to be a haven for pirate activity. Because of this, both corporations maintain a sizeable security force at Harmony.

Ever since the police action began in the close neighbour system 36 Ophiuchi C, a steady stream of UEAF traffic has used Harmony as a way station/staging area between the Core Systems and the fighting. A new industry has grown up around the influx of military personnel to the colony.

Orbit 3: Howard's Hope Class 3 Colony



Orbit Radius	0.73 au
Type	Rock
Density	0.9
Diameter	5719 km
Gravity	0.4 G



ATMOSPHERICS / ORBIT

Atmosphere	Trace
Pressure	0.001
Composition	Trace elements
Orbital period	285 days
Rotational period	56 hours

TEMPERATURE / SATELLITES

Polar	-216°C
equatorial	-180°C
Satellite	0
UNUSUAL FEATURES	
High radiation; Meteor showers.	

WATER

Water	Ice particles
% water	0
% ice	11
% clouds	0

MINERAL RESOURCES

Metal ore	21
Radioactive ore	17
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

A small United Americas mining colony. Howard's Hope is a desolate, rocky world plagued by frequent and violent meteor storms. Approximately 1,500 colonists live in a subterranean warren of caverns: part natural, part excavated by colonial engineers.

Orbit 5: Newland Class 3 Colony



Orbit Radius	4.81 au
Type	Rock
Density	0.76
Diameter	1854 km
Gravity	0.13 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	N/A
Orbital period	412 days
Rotational period	40 hours

TEMPERATURE / SATELLITES

Polar	-271°C
equatorial	-100°C
Satellite	0

UNUSUAL FEATURES

High radiation; Meteor showers.

WATER

Water	Ice particles
% water	0
% ice	3
% clouds	0

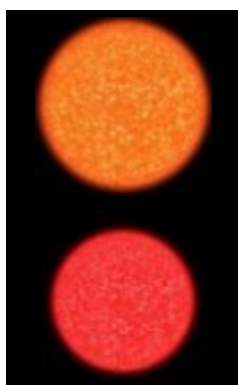
MINERAL RESOURCES

Metal ore	19
Radioactive ore	21
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

Newland is a small Russian mining colony on rocky moon orbiting a Saturn class gas giant.

CD-36 13940



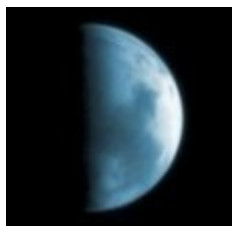
Main Star	CD-36 13940 A
Type	K3 V orange dwarf
Age	3.1 billion years
Distance from Sol	19.74 light years
Companion Star	CD-36 13940 B
Type	M3 V red sub-dwarf
Age	2.98 billion years
Distance orbit	42 AU

Description:

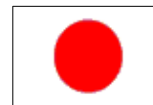
CD-36 13940 is a binary star system consisting of an orange-red dwarf and a red sub-dwarf in the Outer Colonies.

Also referred to as Herschel 5173, the main star has about 82% of Sol's mass and diameter and less than 23% of its visual luminosity. A system of 7 planets orbit this star. So far the only colony in this system is a small mining colony on a moon orbiting the Saturn class gas giant 'Shinju' ('Pearl').

Orbit 5: Shinju 17 Class 3 Colony



Orbit Radius	11.2 au
Type	Ice ball
Density	0.3
Diameter	3112 km
Gravity	0.1 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	N/A
Orbital period	612 days
Rotational period	11 hours

TEMPERATURE / SATELLITES

Polar	-273°C
equatorial	-100°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Glaciers
% water	0
% ice	100
% clouds	0

MINERAL RESOURCES

Metal ore	0
Radioactive ore	0
Precious metal	0
Raw crystal	0
Precious gems	0

Description:

A moon orbiting the Neptune class gas giant Shinju ('Pearl'), Shinju 17 supports a Japanese ice-mining colony, with a population of just short of 1000.

82 ERIDANI



Main Star	82 Eridani
Type	G5 V yellow dwarf
Age	3.1 billion years
Distance from Sol	19.77 light years

Description:

82 Eridani is a star system consisting of yellow-orange dwarf star in the Outer Colonies. The star is almost identical in mass and diameter to Sol, though with only 60% of its luminosity.

Four planets orbit 82 Eridani but only the second planet orbits within the habitable region capable of supporting liquid water.

Orbit 2: Aricebo Class 2 Colony



Orbit Radius	0.8 au
Type	Steppes
Density	0.9
Diameter	11651 km
Gravity	1.1 G



ATMOSPHERICS / ORBIT

WATER

NEW HORIZON, core rules 6.2 – volume 2

Atmosphere	Standard
Pressure	0.839
Composition	Nitrogen/Oxygen
Orbital period	275 days
Rotational period	25 hours

TEMPERATURE / SATELLITES

Polar	-45°C
equatorial	13°C
Satellite	2

UNUSUAL FEATURES

Water	Oceans
% water	22
% ice	1
% clouds	58

MINERAL RESOURCES

Metal ore	71
Radioactive ore	17
Precious metal	0
Raw crystal	0
Precious gems	11

Description:

When Hallidor Corporation developed Aricebo as an agricultural colony, it needed minimal terraforming. Aricebo's climate makes the planet excellent for growing crops, especially the genetically engineered crops developed by Biol Corp in partnership with Hallidor.

Aricebo is 78% landmass, with most water located in the northern hemisphere. It is here on the shores of this sea that Puerto Casado, the colony starport and capital city is located. In geosynchronous orbit above Puerto Casado is the Aricebo orbital cargo facility. The monorail route on Aricebo connects all three of the major urban regions on the planet.

It provides a fast means of transport for colonists and for cargo.

Aricebo has a population of 2.3 million, most dwelling in the northern hemisphere, where over 80% of the agricultural assets are located. The southern hemisphere is dotted with automated mines, mining metal from the ore-rich mountain ranges that dominate this region. Huge OCM tractors rove the steppe, piloted by company employees and private prospectors alike.

Notable Locations:

- Puerto Casado, Aricebo's capital city and location of the colony's starport.
- San Cristobal, a small colony city and the planet's main commercial centre.
- Villa Vincezio, a small city.

History:

2270 Civil unrest leads to intervention from the ICA

Violent civil unrest destabilises the Aricebo colony. Disputes over colonist share rights and living conditions escalate into open conflict, which has now been raging for almost 4 months. Rebel forces, backed by elements of the local ColSec garrison who have defected are fighting Hallidor security forces and ColSec troops still loyal to the ICA.

DELTA PAVONIS



Main Star	Delta Pavonis
Type	G5 V yellow dwarf
Age	3.27 billion years
Distance from Sol	19.92 light years

Description:

Delta Pavonis is a star system consisting of yellow-orange dwarf star in the Outer Colonies. The star is fairly similar to Sol, with about 1.1 times Sol's mass, 1.06 times its diameter and about 1.18 times its luminosity. It is orbited by a system of 6 planets and is home to three colonies.

Orbit 1: Inferno Outpost



Orbit Radius	0.22 au
Type	Inferno
Density	0.9
Diameter	14398 km
Gravity	1.02 G



ATMOSPHERICS / ORBIT

Atmosphere	Dense
Pressure	2.61
Composition	Carbon dioxide
Orbital period	98 days
Rotational period	46 hours

TEMPERATURE / SATELLITES

Polar	309°C
equatorial	376°C
Satellite	3

UNUSUAL FEATURES

Extreme vulcanism.

WATER

Water	None
% water	0
% ice	0
% clouds	48

MINERAL RESOURCES

Metal ore	29
Radioactive ore	36
Precious metal	0
Raw crystal	0
Precious gems	10

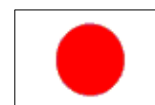
Description:

A world that is like a vision of Hell itself, Inferno is much like Earth must have been when it was pre-primordial. The planet is uninhabited save for a Chinese Consortium scientific research base in a low geo-synchronous orbit around the equator.

Orbit 2: Kentaro's World Class 1 Colony



Orbit Radius	1.08 au
Type	Terran
Density	1
Diameter	15337 km
Gravity	0.8 G



ATMOSPHERICS / ORBIT

Atmosphere	Thin
Pressure	0.74
Composition	Nitrogen/Oxygen
Orbital period	375 days
Rotational period	26 hours

TEMPERATURE / SATELLITES

Polar	-33°C
equatorial	11°C
Satellite	1

UNUSUAL FEATURES

WATER

Water	Oceans
% water	81
% ice	3
% clouds	39

MINERAL RESOURCES

Metal ore	29
Radioactive ore	24
Precious metal	0
Raw crystal	0

Primitive life forms.

Precious gems

10

Description:

Kentaro's World is a picturesque temperate Terran world, covered in lush virgin forests, rolling plains and clear blue oceans. It is the location of a relatively young Sino-Japanese colony funded by a Motokatsu-Kyono Combine/Cheung Corp joint venture and is home to approximately 50,000 colonists. There is a cap on colony growth/immigration at this time until the assigned ICA Settlement Welfare Team has classified all the major species of indigenous flora and fauna.

Orbit 3: Jewel Class 3 Colony



Orbit Radius	1.28 au
Type	Jungle
Density	1.2
Diameter	12928 km
Gravity	1.42 G



ATMOSPHERICS / ORBIT

Atmosphere	Exotic
Pressure	1.56
Composition	Nitrogen/Carbon dioxide/Methane
Orbital period	412 days
Rotational period	18 hours

TEMPERATURE / SATELLITES

Polar	-11°C
equatorial	36°C
Satellite	3

UNUSUAL FEATURES

Exotic atmosphere; Primitive life forms; High humidity.

WATER

Water	Oceans
% water	76
% ice	0
% clouds	91

MINERAL RESOURCES

Metal ore	69
Radioactive ore	24
Precious metal	0
Raw crystal	0
Precious gems	11

Description:

When survey ships first visited the Delta Pavonis star system, they named the third planet 'Jewel', on account of how from orbit the planet resembled a beautiful orb of white-flecked jade.

Down on the surface the survey team discovered that looks could be deceiving. Jewel was covered in primeval rainforests and swamps which teemed with alien flora and fauna, all of it completely incompatible with Earth-life and much of it actively hazardous. With almost one and a half times terrestrial gravity, active volcanism and an atmosphere made up primarily of nitrogen, methane and carbon dioxide, Jewel had proved to be anything but idyllic.

Thirty years on, there is still only one major colonial settlement, with about a dozen small research bases scattered across the planet. Population growth is slow – the total colonial population is approximately 8,000, hindered by the hostile nature of the planet's biosphere and lack of immigration.

WOLF 1481



Main Star	Wolf 1481
Type	M3 V red dwarf
Age	4.9 billion years
Distance from Sol	19.95 light years

Description:

Wolf 1481 is a star system consisting of red dwarf star in the Outer Colonies. This cool and dim star is orbited by a solitary Saturn class gas giant that has 26 moons. On one of the moons is a small outpost.

Orbit 1: CB-1184 Class 3 Colony



Orbit Radius	4.9 au
Type	Rock
Density	0.36
Diameter	3612 km
Gravity	0.21 G



ATMOSPHERICS / ORBIT

Atmosphere	Vacuum
Pressure	0
Composition	N/A
Orbital period	560 days
Rotational period	67 hours

TEMPERATURE / SATELLITES

Polar	-200°C
equatorial	-100°C
Satellite	0

UNUSUAL FEATURES

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WATER

Water	Ice particles
% water	0
% ice	1
% clouds	0

MINERAL RESOURCES

Metal ore	21
Radioactive ore	10
Precious metal	0
Raw crystal	0
Precious gems	1

Description:

This barren, airless chunk of rock is one of 26 orbiting a Saturn class gas giant, the only planet in the system. It supports a Chinese Consortium mining colony, with approximately 1000 Cheung Corp employees contracted to stripmine the planet of its metal ore.



The Outer Rim Territories

This region lies out beyond Federated Colonies Zone 3. Officially designated Far Space, it is more commonly referred to as the Outer Rim Territories, or simply the Frontier. Out here UEF member states, non-governmental bodies, private concerns, and corporate entities may establish manned or unmanned facilities on celestial bodies for scientific investigation, commercial use or human settlement. Such endeavours however must be registered with, and regulated by, ICA law.

Apart from a few obvious exceptions, ICA presence and influence at colonies in this region is limited, usually no more than a small Settlement Welfare Team. Corporations or other concerned parties may come to local commercial arrangements with each other when engaged in ventures out this far. Most colonies this far out are still in the early stages of colonisation and terraforming. Although the official frontier of the Federal Colonies is 20 light years from Sol, the Emergency Powers section of the Colonial Act (2140) makes provision for all colonies to come under the control of the UEF, either directly or via the ICA. This may work on paper, but the truth of the matter is that the Outer Rim Territories is a lawless place. ICA law runs only as far as to cover criminal events on or concerning Federation spacecraft, in as much as Federation spacecraft must abide by the principles of Space Law. Apart from a few exceptions, there is generally no active policing of Far Space outside of the larger colonies. Most colonies in this region have learned that as long as they keep their heads down and noses relatively clean, ICA control is a remote form of government at best.

Note: The Outer Rim territories have been left mostly as a bank slate for individual Game Masters to develop as they see fit. There are a handful of star systems that, for reasons such as economic and/or strategic significance, curiosity value or adventure plot-background, that have been fleshed out in more detail. They will appear here, bit by bit, as they are inputted. It is important to note that there are many small colonies in the Outer Rim Territories, and military presence is usually limited to policing those colonies with strategic and/or economic importance to Earth and the Core Systems.

Star Systems Of strategic/economic importance in the Outer Rim:

- Luyten 730-18
- Alpha Boötis [Arcturus]
- Alpha Aurigae [Capella]
- 20 Leonis Minoris [Menkalinan]
- HR209



Star systems lying in the Hercules Cluster under the control of the UEF:

- 12 Ophiuchi
- 36 Ophiuchi
- 70 Ophiuchi A
- Wolf 635

Star systems lying in the Hercules Cluster under the control of the Free Worlds Alliance:

- Mu Herculis [Ixion] (occupied by the ICM)
- 72 Herculis
- Zeta Herculis
- V645 Herculis
- Alpha Lyrae [Vega]
- Gamma Serpentis
- Lambda Serpentis
- Psi Serpentis
- HR6806
- 18 Scorpii (FWA seat of power)

Star systems under the control of the Eurasian Rimworlds Combine:

- HR637
- HR857 [EP Eridani]
- Zeta Reticuli
- HR683
- CD53-570
- Tau¹ Eridani
- Alpha Fornacis

The Eurasian Rimworlds Combine

by Wikipedia, John Ossoway, Chris Denne, Dennis Zopfi, Kenneth Hite, Ed. Simbalist & Terry Chessman

"It is not enough that they fear to be beaten by us. They must learn to fear the very sight, that sound of us! We have survived exile. We have survived isolation. We will survive this."

Scolar Visari – first Autarch of the Eurasian Rimworlds Combine

Formed by a group of star systems at the outermost of the European and UPP colonised arms, the rebel colonies that make up the Eurasian Rimworlds Combine seceded during the Colonial Wars of 2258-2260. The leaders of the ERC have refused to sign a treaty with the ICA, granting them substantial autonomy – demanding instead recognition and total independence, something that the ICA were unwilling to give. An unofficial ceasefire has been in effect since 2260, with a 1 parsec DMZ established between ERC and UEF space.



A Clear and Present Danger

An Address to the General Assembly meets of the Federation by Kraig Robert St. Vincent; Fleet Admiral, Representative of UEAF, Sol StarSystem, September 22nd 2268. Federation Journal of the Assembly, 2268-09.22.A4.

Mr. Speaker:

"It is an ancient and honored adage of military science that a soldier would be wise to know his enemy well. As an old soldier, I have com to know one of the enemies of the Federation very well indeed.

In the ten years of its existence, the Eurasian Rimworlds Combine has been in a state of continuous and unrelenting war against its neighbors. The Combine itself is a nation organized for war. The ERC social order is highly regimented throughout, with all "civilian" agencies, institutions, and enterprises serving as auxiliaries for the vast military establishment which is, for all intents and purposes, the Combine itself. The Combine leadership is very ambitious but also dangerously competent. The citizenry are disciplined and loyal adherents of the ERC Supremacy Party and are prepared to make great sacrifices. The Subjugated peoples of the Combine are fearful and obedient. Few having the courage to show active rebellion in the face of ERC rule by terror. The Armed Forces are among the finest in the known galaxy, with excellent training, equipment, and morale. The Combine cannot be discounted as an adversary, and its record is filled with illustrious examples of the bravery of its troops and the superlative tactical skill of its officers.

That is the face of the Enemy. Make no mistake. The Combine is committed to no less than the total subjugation of all worlds and all people everywhere. Their ambition knows no bounds. And the Imperials have long recognized that the greatest obstacle to their plans for conquest has been and always will be the Federation. Who in this assembly doubts that ERC policies have always aimed at the destruction of the Federation? All present here know full well that the fall of the Federation would mark the beginning of the Darkest Age in the histories of the Human race.

A clear and present danger now exists that the Federation will soon be engaged in a bitter war with the Combine. It will be all-out war "to the knife," a conflict so vast in its destructiveness and scale of operations that it will dwarf any conflict fought in the remembrance of any of the human history. The ghosts of a hundred billion victims of ferocious ERC aggression and genocide bear mute witness to the bloody fate that awaits us if the Federation should be defeated.

The ERC must be destroyed! Over the years in this august Assembly I have earned the nickname of "Cato" St. Vincent. But I know the Enemy and, like Cato of old who rose daily and ended every speech on whatever subject with a demand that the Roman Senate act to destroy the Carthaginian foe, I also serve the nation and will not rest until the peril to the Federation is eliminated. The Combine must be destroyed. The Federation will not be the one to initiate that war, but by all the Powers that be in this vast universe, the Federation will finish it once and for all time! The Combine must be destroyed, and the time for debate is over."



Excerpts from "The Eurasian Rimworlds Combine: profile of military state"; edited by Alisair K. Valasareon, Fleet Captain, BRINT Office of Strategic Studies; BRINT Briefing Manual BBMIOSS 1792. A14.C, edition of 2268.

The Rise of the Eurasian Rimworlds Combine

The origins of the ERC, like those of many human-inhabited worlds, can be traced back to the complex situation existing on Terra in the last half of the 21st century and in the 22nd century. Until unification under the United Earth Federation Government, Terra was a world fragmented into more than 200 nations competing for economic, military, and ideological dominance.

By 2059, the benefits of space exploration and colonization became apparent to even the blindest men. In the next decades the United Americas and the Chinese Consortium were born, completing the economic and political union begun in the 20th century with the Common Market. The enormous cost and effort needed to undertake the vast terraforming projects underway on Terra, to construct L-5 cities, and to colonize the near planets were more than any one European nation could bear. Thus full union was brought about to prevent Europe from falling behind.

After the Blackout, being among the farthest removed of all the OutWorlds colonies, the Outer Rim Territories were virtually cut off from Terra by 2222. After that date, only a few starships plied the 20 LY between Sol and the Rimworlds. Contact with other human worlds became attenuated over the next few decades. The Frontier culture therefore took an increasingly divergent course, marked by insular attitudes and deep distrust of anyone or anything "unFrontier."

The Outer Rim Territories worlds were themselves quite fertile and also rich in natural resources. The first colonists were well equipped to develop the new planets, and by the late 22nd century, the Colonies had largely developed self-sufficiency. Indeed, they were well able to maintain technologies in no way inferior to that of Sol. The populations of the colonies expanded at a rapid rate, the colonies tending towards large families which they found easy to support with their abundant produce and rapidly expanding industries.

This allowed the corporations to tax all ships going through the system, on top of the considerable income from trade and re-fueling. The UEF grew concerned and frustrated by Outer Rim's domination over star travel and space trade – traditionally under UEF control – and profiting off colonial endeavors that the UEF itself has underwritten. In response, the UEF imposed new taxes and regulations on space travel and shipping, in which the money was then used to expand the Interstellar Colonial Marine Corps – the UEAF Navy received the bulk of the new budget to develop highly advanced warships principally designed to maintain ICA control in the outer colonies by force if necessary. As part of the new regulations, the UEF rescinded the Outer Rim Administration's privileges; specifically its right to a large home fleet and tariffs on shipping.

The UPP was created by former European Union member states Spain and Germany joining Russia in direct response to the perceived combined threat of the UEF and ICA. Additional members like Vietnam and several other Asian and Eastern European countries later joined. The UPP received massive support from the Chinese/Asian Nations Cooperative, which declined to fold into the UPP due to conflict ideologies. Between 2248 and 2257, several worlds from the Outer Rim, fed up with the corporate greed, seceded from the UEF, while others were annexed.

The Herculis Cluster Administration refused to obey the UEF's regulations, but agreed to enter into talks with the UEF to resolve the issue. However, in 2257, negotiations between Earth and the Herculis Cluster Administration failed to bring a mutually satisfactory resolution, and resulting in the Herculis Cluster finally seceding from the UEF and declaring itself an independent colony, leading to clashes with the UEFA until the ceasefire of 2260.

In 2258, NatSoc, a political movement in the Outer Rim territories, declared itself the Eurasian Combine of Limited Worlds (ERC), in turn splitting from the UPP and demanding recognition and full independence.

The UEF made the decision to send an Expeditionary Force to the Frontier, to seize control of the navigation points between the colonies and Earth, protecting the flow of colonial trade to Earth that would allow a blockade.

The economic crisis soon gave rise to Sclar Visari, a charismatic politician who capitalized on Rimworlds people's growing anger in which he quickly gathered a massive following. Under Visari's rule, he reformed the ERC into a militaristic and xenophobic society. Furthermore, Visari rejuvenated the Rimworlds economy by trading its rich mineral resources to non-aligned planets after breaking the UEF embargo and reaching a lucrative deal with the Herculis Cluster, thereby allowing Visari to pour newfound wealth into the ERC military and turning it into a reckoning force.

Beginning in early August 2259, the ERC launched their invasion. Two ERC fleets were dispatched, one to send after the UEFEF. The Interstellar Colonial Marine Corps were taken surprise in which they suffered massive casualties and territorial losses, opening up the planet to a mass invasion force of the ERC Third Army led by General Joseph Lente. The ERC managed to take large swaths of territory and inflict severe UEFEF casualties in a savage blitzkrieg. By late August, however, the invasion incurs casualties on both sides. The ERC's ground campaign is disrupted by the death of Lente by the actions of four unlikely heroes, led by UEAF Captain Jan Templar. The few remaining ERC of the Third Army were then forced to fall back and regroup.

One year later, the UEAF launched a counter-invasion in an attempt to end the war and neutralize the ERC by capturing Visari and establish an easy-to-control puppet state. However, the UEAF invasion was set to fail due to unexpected fierce resistance from the ERC, culminating in the nuclear devastation at Omicron² Eridani, crippling the UEAF taskforce orbiting Eridanus with great loss of life.

ERC Citizenship

Full citizenship is granted to any human being born in the ERC and evidencing demonstrable loyalty to the Combine. There are several classes of ERC citizenship and subject status, each denoting the degree of freedom and power enjoyed in the ERC. These can be readily identified, as all citizens and subjects must wear a computerized identity card on the left breast, over the heart. The cards are coded as follows:

- Alpha class: black cards edged and printed in gold; this group forms the highest ranking members of the elite leadership group in the alpha class.
- Beta class: black card edged and printed in silver; this group forms the "middle management" level in the Combine State.
- Gamma class: black card edged and printed in white; this group forms the ordinary citizenry of the Combine.
- Delta class: green card edged and printed in white; this group is of somewhat questionable loyalty and enthusiasm for ERC rule and philosophy but are generally "tractable" subjects.
- Epsilon class: grey card edged and printed in white; this group includes all non-humans who have to be obedient to ERC "will."
- Tau class: grey card edged and printed in blood red; this group includes all newly conquered populations, convicted felons serving sentences, and rebellious human populations actively resisting ERC authority.
- Foreign visitor: blue card edged and printed in white; all foreigners must register with ERC authorities for identification and certification. Officials of foreign government are issued with gold edged/ printed cards denoting their diplomatic status. Failure to register is punishable by severe penalties. Loss of identity cards should be reported immediately.

Each group outlined above will be described in more detail below.

All citizens and subjects are expected to carry full documentation at all times. The basic I.D. is, of course, the identity card. This plastic card is embossed with the ERC Seal and displays a front-view picture of the individual. The computer chip contains a variety of data about the card-holder, and it can be read out and compared to central files. Though the cards can be counterfeited without excessive difficulty by high technology culture, the file data cannot be readily accessed for editing and insertion of false information. Federation practice has therefore been to acquire genuine identity cards, relying upon surgical alteration of the facial features and fingerprints of agents to render them physically in accord with the data in the card profile. Retinal patterns remain a problem, however, and a retinagram taken at police or security headquarters will generally expose impostors. Agents are therefore cautioned to take every precaution against arrest unless fitted with BioTech retinal modification, which has a 90% chance of defeating a retinagram.

The Alpha Class

The Alpha Class is the ruling elite of the ERC. With Alpha rank comes high status, privilege, and numerous prerogatives and rights as befit the "proven superior man." Entry into the Alpha Class is based strictly upon personal merit and efficiency of performance of one's duties. No high ranking official of the ERC would think of promoting anyone not deserving of the honor. Failure is regarded with disapproval at all times, and it is inexcusable to promote an undeserving subordinate who might later fail because of obvious shortcomings or weakness in leadership traits. Nepotism thus has little place in the ERC, and "who you know" is of no value to anyone unless he has genuine ability as well.

The Alpha Class is permitted to maintain personal retinues – staffers and bodyguards directly loyal to them, even though they are paid by the State or by the private corporations employing them. ERC Alphas have great power and prestige in Combine society, and the holder of a gilt-edged card expects to be treated with all the deference due to a great lord.

There is considerable cutthroat competition between equals and near-equals in the Alpha Class who are clear rivals for the next position up the ladder. Though the competition is fiercely intense, it normally excludes any activity which might directly threaten the security of the ERC itself. Thus one cannot commit outright sabotage of a rival's activities in his proper sphere of responsibility. Rather, the competition consists of trying to outdo a rival, to score a "coup" by performing one's own duties with unmistakable brilliance and flair, and perhaps simultaneously showing up the shortcomings or failures of one's rivals.

If the ERC has a chink in its armor, it is in this rivalry between equals vying for advancement. In the interests of scoring personal coups, competing Alphas will often withhold vital information or discoveries which might assist their rivals in establishing their own credentials as superlative leaders. Cooperation and coordination of efforts are often lacking if any justification can be found for holding back. And plain "dirty tricks" are employed. These include planting of false or misleading information in the camp of a rival; employment of spies to uncover embarrassing secrets which might be used to blackmail or intimidate; and sometimes even convert sabotage and assassination. However, such tactics are seriously frowned upon. An Alpha caught using them can expect a grave backlash from his superiors, who will seize upon the

slightest pretext to initiate an investigation for possible treason against the ERC. However, this does not stop such practices. They are somewhat exceptional, though, and competition typically follows prescribed lines.

A second weakness of the ERC Alpha system is that real innovation must be initiated from the top. Power cannot be shared, only delegated. Those in subordinate positions are not encouraged to exercise too much personal initiative in sensitive areas without receiving approval from higher authority. The Alpha is held responsible for the failure of his subordinates when he might have intervened, and thus he is unwilling to risk censure by his superiors for actions he has not had a chance to review. One can be assured that any subordinate who takes too much upon himself will receive in triple measure whatever displeasure his superior suffers if there is failure.

The vital quality of the personal staff of an ERC Alpha is its ability to model itself around the personality and policies of the Alpha. In effect, the staffers are expected to become extensions of their Alpha, proxies who can anticipate his decisions. The staffers should be able to react quickly and surely in a system that otherwise would lapse into the "safe" response of approval procedure when unorthodox and dynamic action is demanded. It can be said that ERC success or failure in an emergency is based upon the ability of the leadership to exercise "hands on" control, either by the Alpha personally, or through a staffer with delegated authority and a clear understanding of his Alpha's desires.

The personal retinues of the ERC Alphas are therefore recognized as essential to the smooth functioning of the ERC. Alphas can take their staffs with them when they are transferred to new postings. Their personal loyalties to their Alphas are encouraged by the Combine regime because it encourages efficiency, and liberal rewards are made available for dispensing by the leadership for loyal service. Strong personal bonds often develop between Alphas and their staffers as well. When the stakes are high, all share in the catastrophic effects of failure – for are not the staffers identified totally with their Alphas? At the same time, nothing succeeds in the ERC like success. When an Alpha rises in the power structure, he takes his followers with him. They bask in his glory and enjoy excellent prospects of promotion themselves.

The lifestyle of the Alpha Class can only be described as privileged. They have virtually unrestricted right of movement and will be treated respectfully at all times. They possess the right of summary punishment – meaning that they can order the nerve whipping of any subject below "Alpha" status for any "offense against the Combine." They also possess the right of capital punishment when dealing with offenders in the "Delta--Tau" classes. They are entitled to personal staffs commensurate with their rank, and their households are essentially supported by the State on their corporate organizations.

The Beta Class

Those ERC citizens who fail to qualify for Alpha status still enjoy many rights and privileges denied to the lower orders. The typical citizen is much more limited in his political education than the Alpha Class. Many do acquire considerable knowledge and expertise in their vocations, however. The bulk of the citizenry serve in the lower levels of the ERC government, military, and the skilled areas of the private sector. They can hope to attain Alpha status in later life through loyal and distinguished service, though few really do outside of the staffers in the personal retinues of ERC Alphas. But the Combine system never closes the door on the chance of advancement. There is always the possibility of latent merit not detected in the early years of citizen. Also, the general morale is well served by such a prospect, and the rank-and-file are encouraged to exert themselves to the limit because of it.

All ERC citizens of the Beta class have the right to bear arms in the defense of the State. Most have received military training, if they are not serving outright in one of the armed branches of government. For the ERC is organized in a way reminiscent of the ancient Spartan state on Terra, every citizen being a "soldier of the Combine."

The "Betas" themselves are unshakably loyal. Their political indoctrination begins in early childhood and is reinforced throughout their lives, so that they are indelibly imprinted with the dogmas of Combine Supremacy. As a group, the ordinary citizens can be described as highly disciplined, obedient to higher authority, generally very competent in their areas of specialization, and fanatic in their determine to maintain the ERC system and the special status which they believe they have over all others.

The citizenry appears to quite oblivious to the fact that their Autarch regard them as dependable cannon fodder to be expended judiciously, as needed, in the deference of the ERC and the expansion of the Combine "supremacy" to include the known galaxy. Indeed, the citizens regard it as a high honor to "fall" in the service of the ERC. This, again, is a measure of the effectiveness of Combine indoctrination and propaganda.

The lifestyle of the typical "Beta" is quite comfortable. The full range of technological conveniences is available, and the average income of a family is not inconsiderable. Special benefits, such as free medical care, good educational opportunities, low rates of taxation, and availability of very cheap servants (from the lower classes), etc., all make for generally desirable standard of living. Freedom of movement is somewhat restricted in that internal and ERC passports are required for travel outside one's residence district. But these are usually acquired after the most superficial of formalities in most instances,

The Gamma Class

Humans who willingly collaborate with their Autarch and demonstrate an unmistakable loyalty to the ERC are regarded as potential candidates for ERC citizenship. Those evidencing "merit" by performing steadfast and efficient service to the ERC may be granted full citizenship through a process known as "adlection." Adlection (nomination) by a member of the Alpha Class is a high honor and is much sought after by the "Gammas."

The "Gammas" are regarded as sufficiently trustworthy that they are liable to military draft. Upon completion of 20 years' service "in the traditions of the ERC Armed Forces," a veteran will generally receive full citizenship and "Beta" status by Alpha Decree, unless his commanding officers set down some impediment in his military record which would disqualify him. A soldier might also be awarded full citizenship for outstanding bravery – on the order of a high decoration. The Armed Forces are therefore quite popular among the "Gammas" as a means up the social ladder. This is, of course, no accident. For the ERC has a chronic need of manpower to maintain its almost continuous military adventurism.

Commonly referred to as "half-castes" by the ordinary "Betas," who resent the almost equal status of a group they regard as subjects rather than "real" citizens – the "Gammas" enjoy most of the freedoms and privileges of full citizenship. They may own property, go into business for themselves, and have the protection of the ERC High Courts (reserved for citizens). They also do not receive as high a rate of pay as a citizen, their rates being set at about 75% of a citizen's income. They also pay higher taxes, but not significantly so. Their standard of living is generally lower, too, but again it is quite "comfortable" by ERC standards. And, like the "Betas," they may engage lower class servants.

This group largely lives at a level comparable to that of the "working classes" in the Federation, although some are highly successful at business (usually through close connections with businessmen of the "Beta" class) and become very rich. Members of ERC Alphas' staffs also enjoy an influence and prestige quite beyond the ordinary, for they stand in the reflected power and glory of their masters. They also may have his delegated authority to deal with matters of concern, and in such capacity they possess powers vastly greater than that enjoyed by the ordinary citizen,

The Delta Class

About 20% of the humans living in the ERC are classed as "Deltas," subjects who evidence a woeful lack of enthusiasm for the Combine regime. They cannot be trusted in sensitive areas. Most occupied populations are classed "Delta" after a conquered infrastructure has been put into place.

"Deltas" are kept under strict surveillance and control. A full battery of sophisticated documentation and special permissions are used to monitor and control the movements of this group. People regarded as seditious, except in the family group, unless special permission is granted for a larger assembly. Possessions of any weapon is punishable by summary execution, at the discretion of the ERC authorities. Striking a citizen of the ERC is also punishable by death. Speaking out against the ERC or any Combine regulation or policy is punishable by demotion to "Epsilon" class and a sentence of 10 years to life in forced labor battalion.

On the other hand, those "Deltas" who show demonstrable "submission to Combine supremacy" and cooperation with the ERC authorities can be rated as "Delta Plus" subjects, a designation which gives them special privileges and preferred treatment. In time, clearly loyal "Delta Plus" subjects can hope for adlection to "Gamma" status.

The Epsilon Class

The "Eps" are non-humans who have submitted to ERC authority and are relatively peaceful and submissive. As a "reward," they are accorded treatment somewhat in between that given "Gamma" and "Delta" class humans. However, they can never hope for higher levels in the Combine social order and should be considered as virtual slaves.

The Tau Class

All "Taus" are virtually unprotected by due process of ERC law – "wormfood" in ERC slang. All planets reduced to ERC dominion by armed conquest are automatically classed "Tau" for an indefinite probationary period until the ERC authorities are able to classify individual members of the population. During such a period, the ERC occupation forces will crush any show of civil disobedience or rebellion with a frightful application of force and terror. Breach of Occupation Edicts is almost invariably punished by savage reprisals and crippling general fines against the population at large.

"Tau" classification otherwise includes all criminals and known enemies of the Combine. All "Taus" live under a suspended sentence of death which can be executed at any time by an ERC citizen, "half-caste," or collaborator. Death is the ERC answer to the slightest infraction or breach of discipline.

Life for the "non-man" is a tragic and hopeless fate. The "Tau" is a slave, nothing more or less. His technical competence will be restricted, where ever possible, to Tech/5-6. He is subject to forced draft to labor battalions and will be given tasks considered too dangerous or demanding for others. He is expected to obey all orders or die. His welfare is disregarded, and he receives little benefits from his masters except an almost starvation level allotment of rations and a crowded barracks that scarcely shields him from the elements. He is constantly under the eye of armed guards and overseers, his every movement monitored. He is a prisoner at all times, accorded no freedoms and only a few privileges for good behavior – such as an extra ration portion for exceeding work quotas, etc.

The ERC Nation

The ERC is not a nation in the usual sense. All ERC citizens are defacto members of the huge military establishment which is the ERC, although many serve in what might be classed as civil service positions in other nations. Under the leadership of senior administrators of the "Alpha" class, "Beta" Class citizens are largely engaged in the production and business side of the Combine society. They provide for high tech needs and general logistical support of the military as it prosecutes the ERC goal. The lower classes ("Gamma" to Tau") provide the food and a huge labor pool. Although there are significant differences between them, the ERC is reminiscent of Ancient Sparta with its soldier-citizens and helot slaves.

The Autarch



At the apex of power and authority within the ERC stands the Autarch, the highest-ranking political figure in the Combine. The title of Autarch carries the weight of supreme leadership, akin to the positions of Führer in Nazi Germany and Duce in Fascist Italy. As is customary in totalitarian regimes, the Autarch wields complete control over ERC society, both civilian and military, and possesses absolute and final decision-making authority. Serving as the Commander-in-Chief of all armed forces and the Head of State, the Autarch embodies the strength and essence of the ERC itself.

The underlying principle upon which the ERC is built is that its strength emanates from the indomitable might of the Autarch. Consequently, those who defy direct orders from the Autarch or challenge his rule are often labeled enemies of the state and marked for summary execution, either through organized events or kill-on-sight orders.

The title of Autarch was established during the founding of the ERC, with its founder, Scolar Visari, assuming the position of the first Autarch. Typically, the Autarch is an exceptionally capable and ruthless individual who has surpassed numerous rivals to ascend to power within the ERC. Unlike the democratic process of popular voting in other states, the Autarch is selected by a select few from the ERC elite, particularly members of the ERC Senate. However, it is not uncommon for a designated successor to assume the role of Autarch through hereditary succession. Nonetheless, if the Autarch's skills and judgments are perceived to be faltering, it is likely that a coup d'état will be orchestrated to replace him with a new leader.

The ERC Senate

The ERC Senate, also known as the High Council, is composed of nine Ministers who act as the Autarch's cabinet of advisers. It has been reported that meetings of the Imperial High Council are relatively informal. The Autarch usually initiates the discussion, and the Ministers and their deputies offer clarifications, suggestions, and proposals. For the most part, it is a routine business meeting in which the affairs of the Combine are dealt with and policies and directives are issued. However, meetings may also become the battleground upon which the leadership of the ERC maneuvers and intrigues for greater political power in the Combine.

The Autarch will himself use the meetings to berate Ministers and others he sees as remiss in their enthusiasm for his policies or for delays in their execution. Such moments are sometimes marked by his flying into a seemingly uncontrolled rage. The performance has become a high art, with many subtle nuances of meaning contained in every gesture and intonation. The Seriousness of the situation can be gauged by all present from the length of the tirade and the key signal words and gestures incorporated into the outburst. Thus the "Autarch rages" are observed very, very carefully indeed by everyone present. They provide invaluable clues concerning the current status of the "Victim," the Autarch's attitude toward and concerns about the problem, and the degree of urgency to be attached to the solution.

The Autarch has the final authority and issues his decisions in the form of Alpha Decrees. He is no fool, however, and listens very closely to the advice and proposals of his cabinet. In this way he assures that he has a good chance of

alternatives and sufficient information upon which to base a sound decision. By involving his cabinet in the decision-making process and then delegating the responsibility for carrying out directives for action to one Minister or another, the Autarch can more easily deflect blame to them if things go wrong.

The Ministries

While the power of the Autarch is regarded as "absolute and unquestioned," the authority and privileges vested in the Ministers within their respective domains are not significantly lesser. These high-ranking officials hold positions equivalent to cabinet ministers, each assigned specific portfolios and responsibilities. Many of the Ministers are loyal allies who have been part of the Autarch's personal faction for an extended period.

Needless to say, intense competition exists among the Ministers to maintain and expand their portfolios, often necessitating encroachment upon the realms of their counterparts. This rivalry is strenuous and frequently bitter, making it rare for the Ministers to forge even temporary alliances strong enough to stage a coup d'état and overthrow the Autarch.

THE MINISTRY OF EURASIAN POLICE

The Eurasian Police, also known as the EPR (Eurasian Police of the Rimworlds), serves as a paramilitary force responsible for maintaining internal security within the ERC. The personnel requirements, rank structure, and compensation are comparable to that of the Combat Forces, highlighting the importance and seriousness of their role. Operating as an efficient law enforcement agency, secret police, and army of occupation, the EPR ensures the enforcement of laws and regulations throughout its jurisdiction.

Leading the Eurasian Police is Minister Jorhan Brimve Stahl, who holds the position of chairman and CEO of Stahl Arms, bringing a wealth of experience and expertise to the organization.

The EPR includes both uniformed police officers and specialized units known as the EMP (Eurasian Military Police). The uniformed police carry out standard law enforcement duties, while the EMP units receive specialized training in counter-insurgency tactics. They are deployed to maintain order in "restive" worlds and serve as military police in rear areas of operational armies. Equipped as light mechanized infantry, these units also provide SWAT squads for the EPR, with their members wearing power armor for enhanced capabilities.

The distinctive uniform of the Eurasian Police features a black base with red trim adorning the collar, shoulder straps, and trouser seams. The EPR insignia, a jagged red thunderbolt overlaying the initials EPR or EMP, is worn on the collar and the red-trimmed cap. Rank insignia mirrors that of the Alpha Guard, with stars and hash marks appearing in red, highlighting the unique identity of the Eurasian Police within the ERC.



THE MINISTRY OF EURASIAN SECURITY POLICE

The dreaded ESPR, (Eurasian Security Police of the Rimworlds) is universally feared and hated, for it is the secret police arm of the ERC and has a sweeping mandate to search out and hunt down all enemies of the Combine. The ESPR operates outside the legal system, allowing them to act with impunity and unconditional authority. Through a combination of informers, phone taps, detention without trial or charge, and warrant-less searches, the EPR maintains an atmosphere of fear and suspicion among both the civilian and military populations. Their ambiguous interpretation of "anti-State" tendencies has sent countless innocent men and women into the hands of torturers, and has created a hatred for them throughout the Rimworlds, enhanced further by their policy of encouraging the denunciation of so-called "enemies of the State".

The current minister of the ESPR is colonel Tendon Cobar, a psychotic High Commander.

The ESPR typically wear mufti or appropriate uniforms as disguises when carrying out covert investigations. Uniforms are identical to those of the Leader Guard, except that rank insignia are red stars and hash marks. The ESPR insignia is a twined silver thunderbolt superimposed over the initials of the service.

The Minister of the ESPR is usually one of the most trustworthy lieutenants in the Autarch's personal faction. Often he is a "half-caste" adlected to the "Beta." Rarely will he survive the overthrow of the Autarch, for he has many enemies. Thus he is fanatically loyal and spares nothing and no one in his efforts to maintain the Autarch in office and to discredit and indict all serious rivals.



A significant number of "half-castes" are employed in the enlisted ranks of the ESPR, for covert operations have to be carried out among the "lower orders" in many instances. The "Gammas" are much closer to the subject classes than are the "Betas", and thus often make the best agents. Some "Gammas" achieve high rank in the ESPR once they earn adlection to the "Beta". They tend to become fanatical even by ERC standards.

The ESPR, itself exercises a curiosity far beyond its internal security mandate and conducts espionage in the Federation. To further compound matters, the FES, or Foreign Espionage Section, of the Foreign Ministry also operates spy networks outside the ERC, organizes fifth column groups on planets ripe for invasion, and the like.

A complex network of informers is also employed to gather intelligence at all levels of the ERC social order. So pervasive is the ESPR "presence" that little escapes the "Thought Police".

THE MINISTRY OF INFORMATION

The Ministry of Information serves as the propaganda arm of the ERC, overseeing all media operations and conducting extensive public "information" programs for both internal and foreign audiences. With a team of highly skilled media and psychological experts, the ministry skillfully promotes the virtues of the ERC system, showcasing the sophistication and talent of its specialists.

Under its purview, all forms of entertainment are carefully managed, and the ministry maintains a general censorship function over electronic and non-electronic media. This includes restricting the dissemination of cultural practices that are deemed as breeding opposition to ERC rule. Collaborating closely with the Ministry of Education, propaganda specialists work to indoctrinate the younger generation, shaping their beliefs and values. Furthermore, the ministry prepares programs for occupation authorities on conquered planets and develops agitprop initiatives against planets targeted by the ERC.

Hera Visari, daughter of Scholar Visari and a prominent member of the NatSoc party, currently serves as the Minister of Information. Hera is an intelligent and cunning individual, fiercely loyal to her father and his cause. As a skilled strategist and influential political figure, she wields significant power and exerts a strong influence over her father's decisions. While she is often portrayed as cold and calculating, Hera also displays a softer side, particularly in her interactions with her father and her genuine concern for the well-being of the people.



THE STARFLEET'S MINISTRY

The Ministry of Starfleet serves as the central authority overseeing all military operations and technological advancements in space within the ERC. With ultimate control over the government's space fleets, it works tirelessly to uphold the supremacy of the ERC by addressing potential threats and rivals. Appointed by the NatSoc party, the ministry's leaders are entrusted with enforcing government policies and goals across the Outer Rim, ensuring the dominance of the ERC. Backed by significant resources, the Starfleet's Ministry engages in extensive research and development to forge new weapons and technologies, solidifying the ERC's position in the DMZ of the frontier and beyond.

The ERC space navy adheres to the same requirements for Astronauts, Science Officers, Techs, and Marines as seen in the Federation. The ERC Marines hold identical rank grades to those in the ERC Combat Force (refer to the section below), with their highest attainable rank being grade/14 or Sky Marshal.

At the helm of Starfleet is Colonel Mael Radec, widely recognized as one of the most capable and feared individuals in the Eurasian Combine. Possessing exceptional intelligence and a ruthless leadership style, Radec is a master of combat tactics and strategy. His unwavering loyalty to the ERC cause fuels his relentless pursuit of success, regardless of the cost. Known for his calculated decision-making and willingness to make sacrifices, Radec dons a distinctive black uniform adorned with red markings and a helmet that obscures his face, further amplifying his intimidating presence on the battlefield.



THE MINISTRY OF COMBAT FORCES

The ground forces of the ERC include the army, attached aerospace forces (starfighters and aircraft), planetary defense batteries, and militia reserves. The requirements for army personnel are the same as in the Federation.

The current minister of Combat Forces is admiral Orlock, the most trusted advisor of Autarch Visari and second in command of the Eurasian Combine.

Rivalry between the StarFleet and the Combat Forces is traditionally bitter. The Combat Forces regard StarFleet as a transport/support organization for the army and little more. For its part, StarFleet evidences open contempt for the ground forces and resists every attempt of the army to dictate to it. It is amazing that there is any cooperation between them at all. Yet the Armed Forces seem to be able to get the job done, for the Federation is hated even more than the rival services.

The ERC StarFleet and Combat Forces maintain competing intelligence services under the command of a Vice – Admiral and a Colonel-General, respectively (rank grade/12). These are both quasi-independent bureaus under the High Commands of their respective services and do not answer directly to field commanders.

Competition between all of these agencies is bitter, and cooperation is sometimes sadly lacking. Indeed, their suspicion of each other is extreme, and they sometimes devote considerable effort to discrediting each other or working deliberately at cross-purposes whenever one agency feels another has stepped into its rightful sphere of operations. Intelligence agents of the Federation operating inside the ERC may find, on occasion, that they will be able to use this rivalry to good effect.

Created as the armed wing of the NatSoc Party, the Eurasian Security Squadron (Eurasian-SS) fights alongside the regular army, although it is fully independent and answers to the political leadership of the NatSoc Party, rather than to the Combat Forces. However, in tactical situations command is often given to the High Command of the Combat Forces.

Eurasian-SS troops are, as a rule, fanatical in their racial purity beliefs and, as the war progresses, are responsible for some of the conflict's most terrible war crimes. Ruthless and disciplined soldiers, Eurasian-SS units receive the best training, equipment, and vehicles, and are deployed as shock troops designed to shatter enemy lines.



THE MINISTRY OF ALPHA GUARD

The Alpha Guard is an elite force composed of powered armor and mechanized/armored units reinforced by integral aerospace forces and also a BattleFleet of exceptional strength. The "Storm Troops" act directly under the authority of the Autarch. Personnel requirements are +1 above Federation prerequisites for enlistment. All ranks receive 150% of standard pay for equivalent StarFleet and Combat Forces personnel. Alpha Guard officers also enjoy a +2 rank grade status over all other personnel in the ERC.

The current minister of the Alpha Guard is general Joseph Lente who answers only to the direct authority of the Autarch, Scholar Visari.

The Alpha Guard is unique in that all personnel begin at the bottom as non-commissioned personnel – rank grade/0! Further-some, there are a good number of regiments in which "Beta" class citizens are permitted unlimited advancement, the only restriction being merit. Entrance requirements are very strict, the loyalty of the recruit being checked most carefully by the security service. The mission of the Alpha Guard is ostensibly to protect the Autarch, but it has grown from a palace guard regiment to a major branch of the ERC Armed Forces. Equipped with the most advanced weapons systems and equipment available, it provides the best shock troops in the ERC. The Alpha Guard is also used to crush rebellion, its devotion to duty bringing a special "enthusiasm" to the task. Put bluntly, the Alpha Guard is the ERC "fire brigade," used whenever the fighting is heaviest and the stakes the highest.

The Alpha Guard also maintains an integral intelligence service (the Bureau of State Security or BOSS), but it is charged largely with detecting plots close to the Autarch and in maintaining the Alpha Guard as an utterly trustworthy force. BOSS conducts covert operations in other government branches in close cooperation with the ESPR. Their key responsibility is the detection and neutralisation of enemies of the ERC leadership, and they are given carte blanche powers to fulfill this mission. Agents of the BOSS operate throughout the ERC and occupied territories, hunting down political opposition and other undesirable elements.

Alpha Guard dress uniforms are black with silver trim at the collar, shoulder straps, and trouser seams. Officers have black epaulets trimmed in white and showing rank by silver stars. Enlisted men show rank by silver hash marks on cuff of sleeve. Garrison hats are black with silver trim for officers and men. Leader Guard insignia is worn on the hat, collar flaps, and a silver trimmed black armband: a twinned jagged thunderbolt of silver superimposed over the initials "L.S.H.F.: (for the Guard motto, "Leader, Supremacy, Honor, and the Fatherland").

THE MINISTRY OF SCIENCE AND TECHNOLOGY

The Ministry of Science and Technology holds a broad jurisdiction over research and development in various areas within the ERC. Its primary task is to coordinate research and production efforts, although this mission faces significant challenges due to inter-Ministerial rivalries and the ERC's chronic paranoia about espionage, hindering the exchange of information. Recognizing the seriousness of these problems, the Ministry operates research institutes and provides funding to university-level researchers, promoting the widespread dissemination of discoveries. While this may result in duplicated efforts, it ensures that important breakthroughs and applications reach a broader audience.

Professor Torr Savic, a brilliant but sociopathic scientist, currently serves as the Minister of Science & Technology. Under the Ministry, there exists a specialized branch known as the Hexenkartothek, which focuses on researching and utilizing the occult for military purposes. Operatives within this branch are members of the Karotechia, an organization dedicated to such endeavors.

Hexen Commando units are temporary combat groups formed from existing Eurasian-SS units, specifically assembled to achieve specific objectives. These missions are highly dynamic, and the formation of Hexen Commando units occurs as needed, with even the Eurasian-SS leadership having limited knowledge of their exact numbers. While not primarily combat units, Hexen Commandos may receive support from Eurasian-SS elements for field operations, and they are provided with necessary resources to accomplish their objectives. The Karotechia extensively employs Hexen Commando units.

During field encounters, Hexen Commando units are often accompanied by Hexenkartothek operatives who serve as advisors to their commanders. In combat situations, they receive support from Eurasian-SS infantry. The presence of Hexen Commandos suggests that the occult is not far behind, making it a significant factor in any encounters with these units.



THE MINISTRY OF PRODUCTION

Production coordinates the activities of industry and business throughout the ERC and deals largely with the management levels of the private sector. Its task is to ensure that production is quickly marshaled to support the military requirements of the moment. The portfolio is very prestigious and ranks as one of the most important in the ERC. The Ministry is broken down into Planetary Sub-Ministries, each under an Under-Secretary. Several of these Sub-Ministries are combined into Provincial or Prefecture organizations under Deputy Ministers who report directly to the Minister.

The current minister is general Armin Metrac, known and feared for his sadistic interrogation techniques and brutal tactics against civilians and soldiers during the Colonial Wars.

In effect, the Ministry is a super-corporation overseeing all of the productive capacity of the ERC and itself directly controlling state owned production facilities (about 15% of the total in the ERC). All required production is fitted carefully into the T/O of the Ministry. While the system might seem very efficient, Provincial, Prefecture, and Planetary Sub-ministries are often suspicious of their rivals and do not cooperate as well as they should. Furthermore, production facilities are directly in the hands of the various branches of the military, and these organs of government do not prove at all cooperative.



THE MINISTRY OF CITIZEN LABOR

The Ministry of Labor assumes the crucial role of training and assigning skilled personnel to various sectors of the Imperial economy. Within the workforce, individuals classified as "Beta" and "Gamma" Class citizens are affiliated with the Eurasian Labor Organization (ELO), which operates as both a labor union and an employer. The ELO adheres to regulations and pay scales to govern the free workers and fulfills labor demands by contracting their services to businesses within the ERC.

Minister Anton Saric, known for his ruthless and sadistic nature, presides over the Ministry of Citizen Labor. Under his leadership, the ministry not only oversees free workers but also manages a large population of non-citizen laborers categorized as "Delta" to "Tau" Class subjects. Operating within the ministry, the Eurasian Foreign Labor Organization (EFLO) has earned a notorious reputation. It oversees penal labor camps, prisons, and similar institutions infamous for their harsh conditions and treatment. These facilities employ "half-castes" as guards and overseers, responsible for managing



the slave labor force. In parallel with the ELO, the EFLO collaborates extensively with private businesses, providing low-cost "contract workers" for menial and highly perilous tasks in the workplace.

In a sinister twist, whispers abound of dark practices within the realm of scientific experimentation under the purview of Minister Torr Savic. Rumors circulate that prisoners and sub-citizens, relegated to the fringes of society, become unwilling subjects in the clandestine research endeavors conducted by Savic's scientific apparatus. These reports hint at a disturbing intersection between the Ministry of Science and Technology and the vulnerable individuals deemed expendable by the oppressive regime. The veil of secrecy surrounding these alleged experiments casts a chilling shadow over the ethical boundaries that the ministry is willing to breach in the pursuit of scientific advancement. However, concrete evidence remains elusive, and the full extent of these atrocities, if they exist, remains shrouded in darkness.

THE MINISTRY OF HEALTH AND RACIAL PURITY

This Ministry is charged with overseeing the health and welfare of ERC citizens and subjects. In addition to the provision of the usual health care, disability and old-age pensions, etc. (automatically given to ERC citizens, but requiring payment by all subject classes), the Ministry also enforces the strict race laws of the ERC.

The current minister of the ministry of HRP is colonel Vyktor Kratek, a zealot for the cause of Eurasian superiority.

The Rimworlds Task Force provide the enforcement arm for the Ministry. The RTF are the vilest manifestation of the NatSoc Party, and truly represent the black heart of their war machine. Their initial function is to act as death squads, following regular troops into occupied territories and murdering anyone considered an enemy of the NatSoc Party.

Utterly without mercy or humanity, the men of these murder squads are even more fanatical than the Eurasian-SS, committing endless atrocities in the field as well as being instrumental in the policing of the labor camps. Unsurprisingly, the Karotechia have an affinity with the RTF, regularly employing them for both defence and strike missions to further their diabolical aims. Adventurers are most likely to encounter these brutes in the company of Karotechia operatives, unless they are unfortunate enough to find themselves in one of the NatSoc labor camps where they will soon learn the depths to which these men will go in the name of the ERC.

The administration of the Ministry is composed largely of fanatic adherents to the NatSoc Party. Ironically, the bulk of the medical personnel are more liberal-minded Neos who clearly do not approve of some of the excesses of the Ministries racial policies. But the extremists are in firm control, and the Medical Research Department of the Ministry routinely carries out experimentation upon living subjects in the penal labor camps. These experiments are not always "medical" and often involve the testing of new weapons systems and chemical, bacteriological, or radiation agents for the military. All personnel associated with these activities are slated for trial as "criminals against sentient life" and face execution in the lethal chamber if they are apprehended by the Federation or the FWA.

It should be noted that all medical officers and medics in the ERC military are seconded to the service from the Ministry.



The NatSoc Party

Virtually every aspect of the ERC society bears the imprint of the policies and doctrines of the NatSoc Party of the Combine, known simply as The Party.

The Party is not, strictly speaking, a branch of the ERC government. Yet it has a place in the highest councils of the nation and exerts immense influence over all facets of ERC life and politics. Officials of the Party organization have +2 rank grade status over all equivalent grades of personnel, save in the elite Leader Guard and the ESPR. For it is headed by the Autarch of the ERC, and the Party exists as the instrument of the Leader's personal will and the guardian of the very concept of Human Supremacy in ERC society.

The Party was formed in 2246. The NatSocs advanced the view that the Slavic inhabitants of the UPP had degenerated into a mongrel strain of undermen so vastly inferior and corrupted that they were no longer fit to be considered as human at all. This infection, argued the NatSocs, had spread so thoroughly in the UPP that the entire population was probably beyond redemption from the Beast Within. They similarly felt that the predilection of the Federation and the Mercantile League for broadly anti authoritarian and racially tolerant practices was, again, the result of degeneracy.

They evolved a 'science' of Race Analysis and Verification to identify and separate the True Men from those possessed by the Beast Within. This race science has been almost universally accepted in the ERC and is a standard instrument of State policy used to classify all humans born in or else incorporated by conquest into the ERC. The upshot is that the tests qualify those who evidence European ancestry and a predilection to ERC views of the way things should be.

So horrendous is the crime of racial dilution and corruption by inferior blood that the NatSocs advocate the total extermination of the brutish races of mankind to ensure the purity of the Master Race. They have prevailed in that strict laws and savage punishments exist to discourage any form of intermarriage between ERC of proven blood and those of mixed or corrupted blood.

The NatSocs are centered upon the ESPR, the BOSS, the Eurasian-SS, and the Ministry of Health and Racial Purity, where they can give the fullest scope to their racial policies. Though violent racists when it comes to non-humans (ie Bioroids or Transhumans), they reserve their deepest enmity for democracy in all its forms. That is a flat denial of Solar Visari's teachings that the strong have a right to dominate the weak. This has placed the FWA and the Federation high on the list of interstellar nations marked down for destruction to the last stone.

The Karotechia

"But if we fail, then the whole world... will sink into the abyss of a new Dark Age, made more sinister... by the lights of perverted science."

Winston Churchill – Prime Minister of the United Kingdom



The NatSoc Party stands as a sinister embodiment of human evil, casting a dark shadow across the star systems. Yet, there exists a name whispered with trepidation, capable of striking fear even in the hearts of the most ruthless Rimworlds Task Force. Known only to the NatSoc Party as the Karotechia, they move stealthily, shrouded in secrecy, traversing the shadows between worlds.

Cloaked in a deceptive guise of academic and scientific legitimacy, the true mission of the Karotechia remains a closely guarded secret. Within their own ranks, they inspire fear and mistrust among the Combat Forces, operating in tandem with their brethren in the Security Squadron. Their practices, rooted in the foulest of crafts, are said to be executed in the name of the Autarch, further fueling the horrors they unleash.

The mention of the Karotechia invokes greater terror than the perils of deep space itself. Unconcerned with friendly casualties, their sorcerers indulge in their rites, rumored to even encourage deaths to please their malevolent gods. As the Hexenkartothek twists science to birth Visari's nightmare weapons, the Karotechia and their enigmatic master, Reinhardt Weissler, tread forbidden paths. Through long-forgotten blasphemies, they summon ancient horrors to once again roam among the stars.

The Rise of the Karotechia

The Karotechia, shrouded in secrecy, operates behind the scenes of the NatSoc machine, conducting dark practices alongside their brethren in the Security Squadron. Their beliefs and ultimate goal remain veiled in mystery, leaving outsiders to speculate on their true intentions. Rumors suggest that the Karotechia wields significant power and influence, driven by a twisted combination of politics, racism, and a quest to realize an ancient heritage they perceive as the birthright of the German people. However, the true nature of their convictions and the extent of their influence are obscured by a web of secrecy carefully maintained by Reinhardt Weissler, the enigmatic master of the Karotechia. While his presence is felt within the upper echelons of the NatSoc Party, the full scope of his power and influence remains tantalizingly unknown, leaving others to wonder about the depths of his enigmatic persona.

The Priors

The Karotechia, under the command of Reinhardt Weissler, is led by a council of five formidable Priors. These skilled sorcerers hold immense power within the cult and are entrusted with overseeing its operations. While each Prior possesses their own unique area of expertise, they all possess the authority to independently lead the Karotechia. Veiled in secrecy, they operate from hidden sanctuaries, shielding themselves from prying eyes and adversaries alike. Yet, when crucial missions arise, the Priors do not hesitate to step into the field, personally directing the lower ranks with unwavering command. Their presence amplifies the potency and effectiveness of the Karotechia's endeavors.



Key figures

Reinhardt Weissler, Exarch of The Karotechia

Reinhardt Weissler is the undisputed leader of the Karotechia, feared and respected by even the highest echelons of the NatSoc Party. His reputation as a powerful sorcerer and his dedication to the worship of Satan give him immense authority within the cult. He is a skilled sorcerer, utilizing ancient and forbidden knowledge to further his own agenda. While he may work alongside the Nazis, he ultimately sees them as nothing more than pawns in his grand scheme to release Satan into the world.

Appearance:

Despite his advanced years, the secrets imparted to Weissler by Satan have preserved his tall, lean body, and outwardly he appears to be no more than fifty years old, with black hair heavily streaked with silver, and wrinkles slowly settling into his angular face and around his blazing brown eyes. As a result of Satan's interference Weissler's aging process has effectively been halted, but at a cost. Once each month he requires a transfusion of fresh blood to prevent his body returning to its true centenarian state, an event that would doubtlessly kill him.

STR: 12 Move: 8
 DEX: 12 HP: 22
 INT: 17 Dex SR: 2
 CON: 07 SAN: n/a
 SIZ: 15 DB: +1D4
 APP: 13
 POW: 23
 BRA: 19



Skills:

Archaeology 60%, Astronomy 30%, Biology 45%, Chemistry 30%, Forbidden Science 60%, Dodge 50%, Data Analysis 70%, Medicine 70%, Persuade 60%, Occult 80%, Pharmacy 35%, Psychology 45%, Spot Hidden 70%, Greek 85%, Latin 80%.

Mina Wolff, Karotechia Commander

Wolff is a skilled and ruthless operative of the Karotechia. Her expertise in theft, coercion, and violence makes her an invaluable asset to the Karotechia's operations, which involve the acquisition of powerful artifacts and knowledge from across the ERC.

Despite her allegiance to the Karotechia and its goals, Wolff is known for her independence and is often suspected of harboring secret ambitions. While she claims to be a true believer in the cult of Satan, some within the organization are wary of her loyalty and suspect that she may have her own agenda.

Wolff's role within the Karotechia is that of a high-ranking commander, responsible for overseeing a number of covert missions and operations. Her authority is second only to that of Reinhardt Weissler, the Exarch of the Karotechia, and she is often called upon to carry out tasks that require a deft touch and a willingness to do whatever it takes to succeed. As the Karotechia expands its influence and reach in the ERC, Wolff becomes increasingly important to the organization's plans. Her knowledge and expertise in the acquisition of artifacts and knowledge are unmatched, and her loyalty to the cult of Satan is unquestioned – or so it seems.

Appearance:

Mina's striking beauty appears to place her in her late twenties. No-one remembers her changing much over the last two decades, as if time itself is standing still to applaud her countenance. Of course, those who inquire too closely about her exact age and origins are seldom heard from again. Mina's chiseled cheekbones, shoulder length blond hair (tightly bound under her commander's hat), and stunning bright blue eyes set her apart from the crowd. Her body is lithe, and she is extremely fit. Her stamina is legendary, as she works relentlessly driving her team to discover the lost secrets of impious grimoires. More importantly, she is strategic in her thinking, achieves the best from those around her, and lacks the desire for political games that cripples the NatSoc leadership.

STR: 14 Move: 8
 DEX: 14 HP: 23

INT: 17 Dex SR: 2
CON: 12 SAN: n/a
SIZ: 11 DB: +1D4
APP: 17
POW: 20
BRA: 17

Skills:

Anthropology 36%, Archaeology 45%, Astronomy 35%, Bargain 50%, Biology 21%, Chemistry 60%, Climb 50%, Forbidden Science 45%, Dodge 48%, Data Analysis 60%, Electrical Repair 60%, Mechanical Repair 70%, Navigation (Air, Sea) 35%, Occult 65%, Persuade 70%, Physics 50%, Pilot Aerospace 60%, Ride 65%, Latin 55%.



Albrecht Lohmann, Prior of The Karotechia

Albrecht Lohmann is the military commander of the Karotechia, with jurisdiction over both the Canons and the Walking Dead. Cruel and heartless to the core, Lohmann's zeal for the completion of the Karotechia's ultimate goal quickly brought him to Weissler's attention, with the Exarch relying upon him more and more to implement his strategies and to punish transgressors, both inside the Karotechia and beyond.

With the exception of Weissler, Lohmann is without a doubt the most powerful sorcerer within the Karotechia, and preferring to lead by example, he is known to undertake some of the most critical missions in the field himself. His willingness to stand beside them in battle has created a strong bond between him and the Canons, who are utterly loyal to him, a fact that causes increasing alarm to the other Priors. The Exarch, too, is aware of the potential danger but confident in his own ability to deal with Lohmann, he prefers to encourage him as the devotion shown to him by the Canons proves a useful advantage.

Appearance:

Although greying at the temples, Lohmann still possesses a rugged handsomeness, though his piercing grey eyes and permanent sneer give him an arrogant and unfriendly air. Ever vain, Lohmann spends much time maintaining his athletic physique and loves wearing the uniform of the Eurasian-SS, believing it shows off his fine form to even greater effect. To his mind, his only physical failing is the scarring around his neck caused by a childhood case of chickenpox, which he disguises under high collars and cravats.

STR: 17 Move: 8
DEX: 16 HP: 32
INT: 15 Dex SR: 1
CON: 17 SAN: n/a
SIZ: 15 DB: +1D6
APP: 15
POW: 18
BRA: 14

Skills:

Climb 55%, Command 63%, Forbidden Science 50%, Dodge 60%, Data Analysis 63%, First Aid 40%, Jump 55%, Listen 45%, Martial Arts 60%, Occult 67%, Physics 23%, Psychology 43%, Ride 73%, Spot Hidden 64%, Swim 75%, Tactics 63%, Throw 61%, Track 59%, Hebrew 34%.



Astrid Urner, Prior Of The Karotechia

From an early age, Astrid Urner exhibited a talent for languages and, encouraged by her liberal parents, she was soon fluent in many of them, spending several years studying at Oxford University on Earth, where she developed a fascination with classical and dead tongues. It was during these studies that she fatefully encountered Aleister Crowley's infamous translation of the "Compendium Maleficarum". Intrigued by the revelations contained within the book, she began to search for evidence of the original tome and the "De Umbrarum Regis Novum Portis", convinced that they must represent the root to access the gates of the Shadowy World.

Her investigations soon came to the attention of Weissler, who approached Urner, tantalising her with fragments of impious scripts recovered by Karotechia and promising her more in return for her allegiance. Her lust for knowledge

inflamed, Urner readily accepted and swore an oath of fealty. She now leads Karotechia's analysis section, poring over every shard of knowledge plundered by them for clues to the demonic tongue.

Urner's direct authority over Karotechia's Novices and her personal involvement in expeditions and excavations have led her to glean many spells and enchantments from the material salvaged by her investigators, making her an accomplished sorcerer in her own right. While she is outwardly loyal to Weissler and the Karotechia, Urner secretly harbors affection for Mina Wolff and often passes information to her in the hope of recognition. Her single-minded pursuit of knowledge and obsession with the demonic tongue have made her a valuable member of the organization, but also a potential threat if her loyalties were to shift.

Appearance:

Years of poring over the dusty remains of antiquity have taken their toll on Urner. She walks with a stoop and requires a cane as a result of the deterioration of her spine. Her breathing is often laboured and ragged, caused by exposure to dust and other contaminants, and her speech is frequently punctuated by fits of wracking coughs. Her once auburn hair is now dull and brittle, and her watery brown eyes squint out from behind thick spectacles. She tends to dress conservatively in tweeds, preferring civilian dress to military uniform, which serves to give her the appearance of a spinster aunt rather than a black magician.

STR:	10	Move:	6
DEX:	10	HP:	19
INT:	18	Dex SR:	2
CON:	08	SAN:	n/a
SIZ:	11	DB:	none
APP:	08		
POW:	20		
BRA:	16		

Skills:

Anthropology 75%, Archaeology 55%, Astronomy 45%, Forbidden Science 55%, Data Analysis 83%, Geology 48%, History 83%, Library Use 91%, Medicine 62%, Natural History 71%, Occult 83%, Pharmacy 21%, Psychology 49%, Coptic 51%, Greek 81%, Hebrew 49%, Latin 78%.

Reiner Lang, Prior Of The Karotechia

The repugnant Lang epitomises the worst in men and, even amidst the ranks of the Karotechia, he is viewed with disdain and repulsion. From an early age Lang showed a talent for science but even as a student some of his practices were viewed with alarm by his faculty. Fascinated by the work of the early alchemists, Lang spent much time scouring forbidden books for ways to enhance his own scientific experiments, but his career was brought to an unexpected halt when he was forced to flee Earth after the disappearances of several homeless people were linked to him.

Although concerned at Lang's carelessness and the attention he had attracted, Weissler saw the potential Lang had to offer. His initiation into the Karotechia gave Lang everything he could possibly want – the resources to carry out his research without hindrance or repercussion, and immunity from the laws of man, giving him the freedom to satisfy his murderous desires as he saw fit.

Lang is now responsible for Karotechia's research and development program, harnessing the magics they discover for the good of the ERC. He is responsible for the creation of the Walking Deads and the adaptation of many spells and formulae employed by the Masters and Canons.

He spends most of his time in his private laboratory meddling with unholy magics, both for the Exarch and to satisfy his own whims. His most important function is to attend to the regular blood transfusions the Exarch requires to prevent his body decaying from the effect of Satan's gift, a duty he believes places him above the other Priors.

Appearance:

An odious and unwholesome man, Lang's flabby and sweaty frame long ago gave him the nickname "Slug" amongst those who know and despise him. His clammy body and head are devoid of hair, even eyebrows, a side-effect of his experiments with noxious substances, and his dark, darting eyes and rotten teeth only add to his vile appearance. Despite his ungainly flab, he insists on wearing uniforms that fail to contain the rolls of fat, causing his clothing to bulge and strain as he moves. He shows little interest in hygiene, and even his dress uniforms are spotted and smeared with untold stains and splatters of both his last meals and the remains of his experiments.

Lang considers himself first among equals compared to the other Priors and believes their dislike for him, especially that of Fleischer (who openly despises the man), is caused by jealousy rather than repulsion.

NEW HORIZON, core rules 6.2 – volume 2

STR: 13 Move: 8
DEX: 09 HP: 26
INT: 16 Dex SR: 2
CON: 11 SAN: n/a
SIZ: 15 DB: +1D4
APP: 05
POW: 17
BRA: 15



Skills:

Astronomy 45%, Biology 74%, Chemistry 82%, Forbidden Science 42%, Geology 39%, History 38%, Listen 51%, Medicine 87%, Natural History 63%, Occult 71%, Pharmacy 91%, Physics 50%, Spot Hidden 51%, Latin 79%.

The Canons

The Canons are easily recognizable by their black silk masks that conceal their faces. They form the Karotechia's primary combat force, employing dark magic to inflict devastating damage on their enemies. Only the most zealous and ruthless Masters are accepted into the ranks of the Canons, where they undergo intensive training in the use of magic to inflict pain, death, and terror. Whenever they are deployed in the field, they are always accompanied by combat troops to ensure their safety as they invoke their enchantments.

STR: 09-11 Move: 8
DEX: 10-12 HP: 20-24
INT: 15-18 Dex SR: 2
CON: 10-12 SAN: n/a
SIZ: 10-12 DB: none
APP: 10-12
POW: 17-18
BRA: 15-18

Skills:

Dodge 31%, Forbidden Science 20%, Data Analysis 30%, First Aid 37%, Occult 34%, Spot Hidden 40%, plus one specialist skill 50%.

The Masters

The Masters are the elite field operatives of the Karotechia, trained to command and guide the Novices in their search for ancient artifacts and forbidden knowledge. They often operate under the guise of the Eurasian-SS, blending in with the military forces of the ERC and using their cover to infiltrate enemy strongholds and uncover secrets.

While not as heavily armed or armored as the Canons, the Masters make up for their lack of brute force with their superior tactics, intelligence, and cunning. They are experts in guerrilla warfare, sabotage, and assassination, and can operate behind enemy lines for weeks or even months at a time.

In addition to their field duties, the Masters are also responsible for training and supervising the Novices, passing on their knowledge and skills to the next generation of Karotechia operatives. They are respected and feared by their subordinates, who know that failure is not an option when working under the Masters' command.

STR: 13-15 Move: 8
DEX: 11-13 HP: 22-28
INT: 13-16 Dex SR: 2
CON: 11-14 SAN: n/a
SIZ: 11-14 DB: +1D4



APP: 10-13

POW: 15-17

BRA: 13-15

Skills:

Archaeology 60%, History 75%, Dodge 35%, Forbidden Science 10%, Data Analysis 30%, First Aid 35%, Occult 55%, Spot Hidden 35%.

Novices of the Karotechia

The Novices of the Karotechia are the entry-level members of the cult and perform a variety of roles in the field, including research, investigation, and analysis. They are not yet initiated into the true order and are excluded from witnessing the true power of Satan until they are deemed ready by their superiors.

Novices are regularly seconded to other units and departments within the NatSoc machine, where they undertake archaeological expeditions and research for the Karotechia. While some Novices may have training in sorcery and witchcraft, most are academic or scientific specialists and are not combat trained. Those who demonstrate a high level of commitment and zeal for the cause may be selected for promotion to the ranks of the Masters. The Novices typically rely on the Eurasian-SS for support in battle, but may accompany Masters or Canons on missions when needed.

STR: 09-12 Move: 8

DEX: 08-13 HP: 18-28

INT: 13-16 Dex SR: 2

CON: 09-14 SAN: 50

SIZ: 09-14 DB: variable

APP: 09-12

POW: 12-15

BRA: 11-14

Skills:

Archaeology 55%, Art (one specialisation) 40%, Anthropology 56%, Astronomy 30%, Biology 30%, Chemistry 40%, Forbidden Science 10%, Geology 20%, History 60%, Library Use 50%, Natural History 40%, Physics 40%, Spot Hidden 40%, plus one specialist language skill 60%.

The Walking Dead

The Walking Dead are a fearsome force within the Karotechia, known only to the highest echelons of the cult. Few outsiders have encountered them and lived to tell the tale. Serving as Weissler's personal guard and elite warriors, the Walking Dead are shrouded in mystery, with their true nature known only to the Karotechia's most trusted members.

Created through the use of dark magic, the Walking Dead are reanimated corpses, taken from the ranks of the dead and imbued with supernatural strength and reflexes in unholy ceremonies. Most are formed from the bodies of Hexen Commandos employed by the Karotechia.

As creatures born in darkness, the Walking Dead are vulnerable to natural sunlight, which causes their lifeless flesh to smolder and burn. To protect themselves, they wear thick, protective uniforms and steel masks with no eyeholes. It is believed that the Walking Dead rely on senses beyond sight to track their prey, which may have been enhanced during their resurrection.

The Walking Dead are a terrifying and deadly force, capable of striking fear into the hearts of even the bravest of foes.

Appearance:

Their countenances hidden behind featureless steel faceplates, and their black uniforms inlaid with silver runes, the Walking Dead possess unnatural speed and vigour, able to close with their enemies at an alarming rate and dispatch



them with their vicious, surgically engrafted, black steel blades, while shrugging off everything but the most persistent gunfire, all in unnerving silence.

STR: 28 Move: 12
DEX: 18 HP: 40
INT: 15 Dex SR: 2
CON: 24 SAN: n/a
SIZ: 16 DB: +2D6
APP: n/a
POW: 15
BRA: n/a

Armour:

- 6 AP of steel encases their heads, while their thick uniforms provide 4 AP.
- Impaling weapons and bullets inflict minimum damage due to their unholy resilience.

Skills:

Climb 60%, Dodge 50%, Jump 60%, Listen 40%, Martial Arts 60%, Sneak 45%, Spot Hidden 60%, Throw 60%, Track 40%.

Inside the ERC

"This is no war of chieftains or of princes, of dynasties or national ambition; it is a war of peoples and of causes."

Winston Churchill – Prime Minister of the United Kingdom

The NatSoc Party's climb to power, which inevitably flings the Rimworlds systems into war, begins over a decade before Scholar Visari finally seizes control after a long campaign of rhetoric and violence. His credo is a particularly dark form of fascism imbued with vicious racism, where only the "right" sort of people are fit to serve the glory of the state. Although traditional histories plant the seeds for the war firmly in the humiliation suffered by the Rimworlds colonies, a variety of forces were conspiring long before that to bring about a change in the established world order.

The timeline below details the major historical events unfolding around those living within the Outer Rim Territories in the run up and during the Colonial Wars.

2249, November	The Mercenary War ended. The contract of Visari's unit is revoked.
2252	NatSoc officially comes into being.
2253, 8 th November	Scolar Visari and his Party march on the ICA complex of Zeta Reticuli. Six members of the NatSoc Party are killed.
2256	Colonies in Zeta Reticuli petition for regional autonomy.
2258	Series of swift and bloody coups against local ICA installations in the Outer Rim Territories.
2258	On Pei Pei colony in the Alpha Mensae star system, rebel fighters raid the ICA complex, capturing many hostages.
2258	The colonies declare themselves the Eurasian Rimworlds Combine (ERC).
2258	The leaders of the ERC demand recognition and total independence.
2258	Scolar Visari is named first Autarch of the Eurasian Rimworlds Combine.
2258	A raid by the ICM, on Pei Pei colony, succeeds in rescuing the majority of the ICA hostages.
2258	State of emergency in the Outer Rim Territories is declared by the UEF.
2258	Martial law is imposed in the Outer Rim Territories and Herculis Cluster.
2258	Project Ebon Serpent: as the war begins, the veil between dimensions weakens, and occult forces start to influence key events. The Karotechia seeks powerful artifacts and ancient knowledge to gain an edge in the war.
2258	The Tientsin Campaign (8 Eta Boötis A III).

A regime change on the independent world of 8 Eta Boötis A III led to the Tientsin campaign, in which Reinhardt Weissler and his Hexen Commandos assist in the overthrow of the government. The UEAF withdraw, and the ERC rebels claim victory.

The Karotechia demonstrates the potential gains that the occult sciences can bring in terms of military superiority on the battlefield. The Exarch of The Karotechia wins the trust of Sclar Visari, who opens the doors of the NatSoc Party to him.

2258	<p>The start of the Persei campaign.</p> <p>Late 2179: Skirmishes and border incidents between UEAF and ERC rebels increase in frequency and intensity across the Persei system.</p> <p>Battle of Persei-5: The conflict escalates into a full-scale battle when ERC forces launch a surprise assault on the UEAF research facility on Persei-5. The facility, heavily defended by the ICM and corporate security, becomes the focal point of the fighting.</p>
2258	<p>Operation Stygian Veil: Deep within the ruins of an ancient civilization on a forgotten planet, The Karotechia uncovered the Codex Noctis, an ancient tome rumored to contain rituals capable of summoning and controlling eldritch forces. Fueled by ambition and madness, the Karotechia began their rituals, seeking to unleash these devastating powers upon the UEAF.</p>
2258	<p>The start of the Ixion campaign.</p> <p>The clash between the UEAF forces and the Karotechia's occult-infested battalions was brutal. Soldiers faced horrors beyond their comprehension as the veil between dimensions thinned, and unspeakable entities slipped through the cracks.</p> <p>Soldiers from both the UEAF and the ERC started experiencing nightmarish visions and hallucinations. Rumors surface of both factions experimenting with biological and chemical weapons, escalating the conflict.</p>
2259	<p>Project Walking Dead: The Karotechia conducts forbidden experiments to reanimate dead bodies with occult powers, combining advanced technology and dark rituals. These enhanced creatures, known as the Walking Dead, become the vanguard of the Karotechia's black ops forces.</p>
2259	<p>The end of the Ixion campaign.</p> <p>The Ixion Campaign concludes, but not without heavy losses and the escalation of bioweapons use.</p>
2259	<p>Project Stygian Eclipse: The Karotechia conducts occult experiments involving powerful artifacts and dark rituals, seeking to unlock ancient knowledge and tap into otherworldly energies.</p>
2259	<p>The end of the Persei campaign.</p> <p>The introduction of occult weapons by the Karotechia had turned the tide, exacting a heavy toll on both military personnel and civilian populations. The use of these horrifying weapons left cities in ruins and countless lives shattered.</p> <p>As the campaign reached its climax, the devastating impact of the Karotechia's occult weapons became undeniable. Both the UEAF and ERC, recognizing the unsustainable losses and the complete breakdown of infrastructure, agreed to withdraw their forces from the Persei system. The once-thriving colonies were left in ruins, a haunting reminder of the cost of war and the malevolent influence of the Karotechia.</p>
2260	<p>The Karotechia delves deeper into necromantic arts, conducting gruesome experiments on sub-citizens. They harness the life force and essence of their victims to fuel powerful spells and rituals.</p>
2260	<p>Epsilon Ceti IV and Betelgeuse Campaign.</p> <p>Despite rumors and speculation, little concrete information about the events of the Epsilon Ceti IV and Betelgeuse Campaigns is available to the public. Official records and documents pertaining to the missions remain classified and inaccessible to outsiders.</p>
2260	<p>ERC Suicide Mission at Omicron² Eridani: An ERC suicide mission penetrates UEAF defenses at Omicron² Eridani, crippling a UEAF taskforce and causing great loss of life.</p>
2260, 1 st May	<p>The Ceasefire</p> <p>No peace treaty is signed, but a 1 parsec Demilitarized Zone (DMZ) is established between ERC and UEF space. Tensions remain high.</p>
2261	<p>Project Shadow Veil: The Karotechia establishes secret research facilities in remote locations</p>

across the ERC territories. These facilities are dedicated to unraveling the mysteries of interdimensional travel and harnessing the power of alternate realms for their own nefarious purposes.

2262	Summoning of the Infernal Legion: The Karotechia attempts a large-scale summoning ritual to bring forth an entire legion of infernal creatures. They believe that with this unstoppable force at their command, they can conquer key strategic locations. Something went wrong. The site is wipe out.
2263	Ritual of Shadowmeld: Seeking to infiltrate the highest echelons of the UEF, the Karotechia performs a complex ritual that allows their agents to blend with shadows and become virtually undetectable. This enables them to carry out covert assassinations and gather crucial intelligence.
2263	Operation Abyssal Whisper: The Karotechia initiates a targeted assassination campaign against MiliSci leaders who possess knowledge of ancient rituals and artifacts that could be used against them.
2267	Operation Infernal Nexus: Reinhardt Weissler and the Priors failed to open the Gates of Hell on a moon of Saturn.
2269	Mina Wolff succeeded to locate and acquire on Earth the infamous tome “De Umbrarum Regis Novum Portis”.
2271	NOW

Rank and Promotions

The ERC is sub-divided into Provinces and Military Prefectures, each under the direction of a Provincial or Military Governor. Each Province or Prefecture has a variable number of Star systems, of course, but all of the Planetary Governors are directly answerable to their district superiors. The organization of the various governments is comparable to that of the ERC Government, except that a few additional ministries are added, such as a Ministry of Public Works, Ministry of Transportation, etc., to see to purely local matters.

ERC Military Ranks Table

Grade	Naval Rank	Command	Army Rank	Command	Pay/Month (\$E\$)
0*	StarShipman/2	–	Trooper/2*	–	500
1*	SterShipman/1	–	Trooper/1*	–	600
2*	Warrant Officer/2	–	Assault Leader/2*	Section	750
3*	Warrant Officer/1	–	Assault Leader/1*	Section	900
4*	Fleet W.O.	Small Craft	Storm Leader*	Platoon	1200
5	Lieutenant/2	Small Craft	Storm Lieutenant	Platoon	1500
6	Lieutenant/1	Corvette	Captain-Lieutenant	Company	2000
7	Lt. Commander	Destroyer	Captain	Company	3000
8**	Commander	Lt. Cruiser	Major	Battalion	4000
9**	Cruiser Captain	Hv. Cruiser	Colonel	Regiment	5000
10**	Fleet Captain	Hy. Unit	Brigade Leader	Brigade	6000
11**	Commodore	Lt. Squadron	Major General	Division	7500
12**	Vice Admiral	Hy. Squadron	Colonel General	Corps	10,000
13**	Fleet Admiral	Task Force	General	Army	12,500
14**	Admiral-General	Battle Fleet	Field Marshal	Army Group	25,000
15**	Minister	StarFleet	Minister	Armed Forces	75,000

* Rank grades open to 'Gammas.'

** Rank grades open to 'Alphas' only.

New Careers

This chapter presents a selection of optional new professions for your Adventurers, all of which are inspired by the ERC setting. The list is by no means complete, and GMs are encouraged to expand upon what is here as they see fit...

ELITE SHOCK TROOPER

"My Duty To The Autarch, My Life For The Rimworlds."

ERC Soldier's Oath Of Allegiance

The Elite Shock Troopers stand as the apex predators within the ERC army's special forces, embodying unparalleled excellence in training, tactics, and combat proficiency. Revered and feared as the "Shocks" or "Leets" among their UEAF adversaries, these battle-hardened warriors are renowned for their unwavering resolve and cunning intellect. Through relentless discipline and rigorous preparation, the Elites have honed their skills to perfection, enabling them to execute missions with remarkable precision and adaptability.

Trained to thrive in the harshest conditions, the Elite Shock Troopers possess an unmatched level of self-sufficiency, capable of operating independently in the most hostile environments. Their extensive training regimen equips them to excel in a wide array of mission profiles, from covert operations to direct combat engagements. Their mastery of various weaponry, advanced tactics, and close-quarter combat techniques makes them formidable adversaries on the battlefield.

Clad in sleek and streamlined armor, the Elite Shock Troopers epitomize speed and agility, effortlessly maneuvering through the chaos of warfare. It is worth highlighting that the revered Leader Guard, consisting exclusively of highly skilled female operatives, showcases the ERC's commitment to meritocracy and gender equality. Their exceptional leadership skills, combined with their unwavering dedication to the mission, further augment the Elite Shock Troopers' effectiveness and impact on the battlefield.

In the face of adversity, the Elite Shock Troopers embody the indomitable spirit of the ERC, exemplifying the highest standards of excellence, bravery, and adaptability. Their presence instills fear in their enemies and inspires confidence in their comrades, ensuring that the Elite Shock Troopers remain a force to be reckoned with in the ongoing conflicts of the Outer Rim Territories.

Occupation Skills:

Dodge, EVA, Zero-G Combat, Alertness, Athletics, Demolitions, Firearms, Heavy Weapons, Melee Weapons, Stealth, Survival, Swim 50, Unarmed Combat

Background:

E\$1000x2d6 savings from profit sharing; personal items related to profession.



PIRATE

"I've seen the worst of the universe, and it's made me a realist. Trust no one, and always watch your back. In this business, blood stains everything."

Frank Elgyn – Captain of the Betty

The Outer Rim Territories serve as the breeding ground for a rich tapestry of pirate factions, encompassing a spectrum of characters that span from merciless murderers to crafty smugglers. Despite intensified endeavors by FedPol and FLEA to curb the most heinous acts of piracy, such as abductions and cold-blooded killings, numerous pirate groups persist in clandestine operations, exploiting defenseless traders and scavengers. Equipped with swift and heavily-armed starships, augmented by cutting-edge technology, and propelled by a penchant for risk-taking, these interstellar marauders remain an ever-looming menace to those daring enough to traverse the uncharted realms of space.

Within the lawless expanse of the Outer Rim, a diverse range of pirate factions roams, each possessing its own distinct modus operandi and treacherous reputation. Some operate with ruthless aggression, employing violence and intimidation to seize valuable cargo and exert dominance over their prey. Others leverage their astute cunning, capitalizing on stealth and



deception to orchestrate elaborate smuggling networks, evading authorities and profiting from illicit trade. Amidst this dangerous milieu, a delicate dance of power struggles and shifting alliances shapes the intricate landscape of piracy.

While FedPol and FLEA persist in their efforts to combat piracy, their progress is hampered by the vastness of the Outer Rim and the elusive nature of pirate activities. The sheer breadth of uncharted territories and the absence of a centralized authority provide ample cover for these renegade factions to operate with relative impunity. Law enforcement agencies are faced with the daunting task of navigating the intricate web of criminal networks, employing sophisticated intelligence-gathering techniques to expose pirate hideouts and disrupt their operations.

As the pulse of adventure and commerce beats within the depths of space, those who venture into the Outer Rim Territories must remain ever-vigilant, knowing that the threat of piracy lurks just beyond the reaches of civilization. The tales of bravery and survival, intertwined with the eternal struggle between law and lawlessness, continue to unfold in this untamed frontier, where the clash between pirates and the forces of order shapes the destiny of those who dare to navigate the stars.

Occupation Skills:

Dodge, EVA, Zero-G Combat, Bargain, Streetwise, Astrogation, Computer Operation, Demolitions, Evaluate, Mechanical (Aerospace), Medical (First Aid), Pilot (Aerospace), Vacc Suit, Conceal, Devise, Spot Hidden, Search, Hide, Sneak.

Background:

E\$1000x1d6 savings from profit sharing; personal items related to profession; 2x contacts.

SPY

"In the shadows I thrive, ever-changing and unseen, a phantom in the game of power and secrets."

Horza Desh – the Changer

Spies are highly-trained agents skilled in the art of information gathering and covert operations. Their abilities include infiltration, sabotage, and intelligence gathering. These individuals operate within a complex web of alliances and rivalries, working for various governments, corporations, or other organizations. They are masters of disguise and deception, and often work in high-stakes situations where the smallest mistake can have disastrous consequences. Spies must be able to think on their feet, adapt to changing circumstances, and keep their true identities hidden from those they seek to infiltrate. In this world of intrigue and danger, a spy's loyalty is often to their mission rather than to any particular organization or cause.

Occupation Skills:

Computer Security, Data Analysis, Dodge, Fast Talk, Hide, Listen, Spot, Stealth, Brawl, Disguise, Firearm (any), Psychology, Electronics Security & Counter-Measures.

Background:

E\$1000x1d6 savings from profit sharing; personal items related to profession; 2x contacts.

TERRORIST

"The prophet will drown all these infidels in lakes of impure blood."

Abdul El Azrral – Imam of ISEL

Terrorism is a tactic employed by extremist individuals or groups who resort to violence against innocent civilians to further their political or religious ideologies. Within the Outer Rim Territories, the most prominent and notorious terrorist group is the People's Revolutionary Army (PRA). The PRA, operating under the backing and support of the FES, sustains its activities through financial resources and the recruitment of individuals dedicated to their cause. Their actions have brought fear and instability to the region, posing a significant threat to the peace and security of the Outer Rim Territories.

Occupation Skills:

Dodge, EVA, Streetwise, Computer (Operation), Demolitions, Evaluate, Psychology, Religion, Vacc Suit, Conceal, Devise, Gun Combat (Hand Gun), Stealth.

Background:

Personal items relating to profession.

The People's Revolutionary Army

"We are the Black Hand. Forged in the fires of Omicron Eridani, and this is our day."

Vladko Tyran – leader of the ERC terrorist group, the People's Revolutionary Army.

The People's Revolutionary Army (PRA) emerged as a radical faction during the tumultuous post-Colonial Wars period. Initially established by Kris Howl and his adopted son Vladko Tyran, the PRA comprises a collection of extremists, fanatics, and disillusioned former military personnel who harbor deep animosity towards the UEF for the immense devastation inflicted upon their people. Interestingly, they also oppose the ERC government's pursuit of peace, advocating for vengeance instead.

Equipped with surplus weaponry from the Colonial Wars and other outdated equipment, such as infiltration projectors that enable them to impersonate UEF Troopers, the PRA operates clandestinely, exerting significant influence within the impoverished slums of the ERC. Their activities are covertly supported by rogue elements within the ERC government, and they have forged an alliance with Jorhan Stahl, the influential Chairman and CEO of Stahl Arms.

Driven by their zealous agenda, the PRA exhibits a willingness to commit heinous acts, even targeting innocent Rimworlds civilians, all in a calculated effort to provoke another devastating war. Their opposition extends to Chancellor Hera Visari and her administration, viewing their pursuit of peace with the UEF as a betrayal of their cause.



PRA Operative

The PRA Operative represents the pinnacle of training within the ranks of the People's Revolutionary Army. These individuals are extensively trained insurgents who excel in executing terrorist operations against the UEF and their allies. Their expertise lies in utilizing advanced infiltration projectors, enabling them to assume the guise of enemy soldiers with uncanny precision. This invaluable ability allows them to infiltrate highly secure locations, striking from within with covert and deadly precision.

Armed with a comprehensive skill set, the Operative is proficient in the use of explosives and small arms, making them a formidable adversary in any confrontation. Their combat prowess is complemented by their expertise in covert operations, granting them the capacity to gather vital intelligence and skillfully sabotage enemy activities. With a keen understanding of stealth and subterfuge, the PRA Operative is a versatile asset capable of inflicting significant damage and disruption to enemy operations.

The ERC Economy

The economy of the ERC is a blend of state run and private enterprises. Most business and enterprises of any size and importance are owned by ERC citizens, particularly by the aristocratic Alpha Class. Smaller businesses are operated by "cooperative" human subjects not qualifying for ERC citizenship. The non-human populations are virtually stripped of all rights and provide slave labor for the Combine and the private enterprises looked upon with favor by the ERC regime.

A complex system of grants of monopoly characterizes the way the ERC do business. These monopolies effectively limit competition in various enterprises or, more commonly, force others wishing to do business in the area covered by a grant of monopoly to deal with the holders of the grant. The effect of all this is not too dissimilar, in some respects, to the basic requirement that one obtain the permission of a holder of a patent or copyright before one can use the item or process. Only, in the case of the monopolies, the holder of the grant has the sole right to do business in the defined areas. This means vast profits for those holding monopolies – and also very considerable revenues to the Combine, which charges stiff fees for such grants.

It has been pointed out that such a policy has severely restricted the over-all productivity of the Combine. The ERC feels, however, that internal security thus won is worth the price. Of course, it has worked a grievous hardship on the subject races, but that is of little concern to the ERC.

Trading with the ERC

Businessmen wishing to do serious and mutually profitable trade with ERC corporations are accorded a special status, which amounts to a classification as a probable spy. However, the Combine is very courteous about it and will take special pains to make the visit comfortable and enjoyable so long as the visitor obeys instructions and regulations without much fuss.

To ensure good behavior and avoidance of some of the more subtle breaches in ERC law and etiquette, the visitor will be assigned a guide attached to the ERC security services. The "guides" are highly trustworthy members, and they are given some specialized anti-espionage training and a contact in the security services – just in case the "visitor" turns out to be acting in a suspicious manner. Otherwise, the guide will be of genuine assistance, easing the lot of the visitor as he tours the Combine or conducts his business there.

Visitors are warned upon entry to ERC space that any attempt to evade the guide is an offense. Such actions are interpreted as prima facie evidence of hostile intentions against the ERC and the visitor could find himself paying a stiff fine and facing immediate deportation, if not worse.

No one in the ERC is permitted to possess any offensive weapon unless he has the authority to bear arms. Generally, only ERC citizens have this right, which is accorded under the ERC Internal Defense Act and applies only to possession and use in the line of duty to bear arms.

Trade in weapons is strictly forbidden in the ERC, except for contracts to supply weapons directly to the military or some other armed branch of the government. Private sales are considered as evidence of intent to foment armed rebellion and are dealt with severely.

If the visitor should run afoul of the law, he is forewarned that ERC justice is swift and implacable. His civil rights, such as they are, will be suspended on the moment of arrest. ERC law holds that the accused is probably guilty until he can prove his innocence. An accused person can expect severe interrogation in serious cases and may even face questioning under drugs or even the mind probe if more conventional techniques of "rigorous questioning" fail to elicit a confession. Conviction of a minor offense will probably bring a fine. More serious breaches, if committed innocently through ignorance, will likely result in deportation from the ERC and a warning not to return. Major offenses will likely bring a term in the Combine prisons or, worse, in the labor battalions of the "Tau" class.

Stahl Arms

Stahl Arms stands as the foremost arms corporation in the Rimworld, dedicating its efforts to the development and production of cutting-edge weaponry for the ERC military. Its inception traces back to the visionary Khage Stahl, the esteemed founder, and the reins of the company are now firmly held by his heir, CEO Jorhan Stahl. In the fierce arena of arms manufacturing, Stahl Arms finds its primary rival in the Visari Corporation, the esteemed family enterprise of Autarch Scholar Visari himself.



At the heart of Stahl Arms' formidable arsenal lies a signature attribute: an unparalleled rate of fire. Their crowning achievement, the iconic StA-52 Assault Rifle, has cemented its place as a mainstay across all phases of the Colonial Wars, serving as the standard-issue firearm for the ERC military. While Visari Corporation sets its sights on high-end weaponry and cutting-edge technologies, Stahl Arms focuses its resources predominantly on the development and production of mass-produced infantry weapons and armor, catering to the needs of the vast ERC forces.

Within the vast halls of Stahl Arms, a private army comprising HAZMAT Troopers stands ever-ready to safeguard the corporation's interests and act as an independent military force. These elite troopers, clad in formidable armor and armed with experimental weaponry, epitomize unwavering loyalty to Stahl Arms. Their unwavering commitment compels them to confront even regular soldiers of the ERC army when necessary, as they remain resolute in their dedication to the corporation's cause.

The Hazardous Material (HAZMAT) Troopers, entrusted with the most dangerous assignments, exemplify Stahl Arms' relentless pursuit of victory over the UEF. Their resilient armor and access to cutting-edge armaments ensure that they are a force to be reckoned with on the battlefield. However, the pursuit of triumph comes at a sinister cost, as Stahl Arms resorts to unspeakable measures, even resorting to the sacrifice of prisoners who serve as unwilling subjects for their weapons research. This chilling disregard for human life reflects the depths to which Stahl Arms will sink to secure their dominance over their adversaries.

Amidst the turmoil of the Rimworld, Stahl Arms stands as a behemoth, pushing the boundaries of military technology and shaping the course of warfare. The clash between Stahl Arms and Visari Corporation embodies the relentless competition that drives innovation in the arms industry, ultimately defining the fate of nations and the lives of countless soldiers caught in the crossfire.

Visari Corporation

Visari Corporation, the formidable second largest ERC corporation in the field of weapon development and production, stands as a worthy rival to the industry leader, Stahl Arms. Under the ownership of the esteemed Visari family, the corporation has carved its own niche in the market. While Stahl Arms focuses on the mastery of projectile-based gunpowder weapons, Visari Corporation delves into the realm of cutting-edge research, specializing in high-tech weaponry and conceptual support systems. One of their renowned creations, the VC32 Sniper Rifle, exemplifies their commitment to producing specialist role weapons.



As a powerful military-industrial complex, Visari Corporation exerts tremendous influence over the Outer Rim. The corporation's political and economic sway reverberates through the region, solidifying its status as a dominant force. With abundant resources and access to advanced technology, Visari Corporation serves as the main supplier of weapons, vehicles, and equipment to fuel the ERC war machine. Their contributions significantly bolster the ERC's capabilities, making it a formidable adversary for the UEF.

Beyond their impressive manufacturing prowess, Visari Corporation's shadowy activities lend an air of intrigue and complexity to the company. Engaging in illicit ventures such as weapons smuggling and espionage, they navigate the murky underbelly of the military-industrial complex. This clandestine involvement further solidifies Visari Corporation's reputation as a powerful and ruthless entity, willing to exploit any means necessary to achieve its objectives.

Within the sprawling landscape of the Outer Rim, Visari Corporation stands tall as a symbol of technological advancement, wielding immense influence that reverberates far beyond the realm of arms manufacturing. Their contributions to the ERC's military might, coupled with their involvement in covert operations, add layers of depth and intrigue to this formidable corporation. As the delicate balance of power continues to shift, Visari Corporation remains a pivotal player, shaping the fate of nations and influencing the course of conflicts in the Outer Rim.

Eurasian Corporation

The Eurasian Corporation, a product of the strategic merger between the once powerful Cheung Corporation and Hallidor Corporation, has emerged as an indomitable force in the realms of energy, industry, and mining. Its inception can be traced back to the tumultuous days of Zeta Hericuli, where it underwent a metamorphosis from the Eurasian Protectorate to the formidable ERC Administration. Today, this industrial behemoth exerts an unparalleled influence, reinforced by a formidable military apparatus committed to preserving its vast interests.



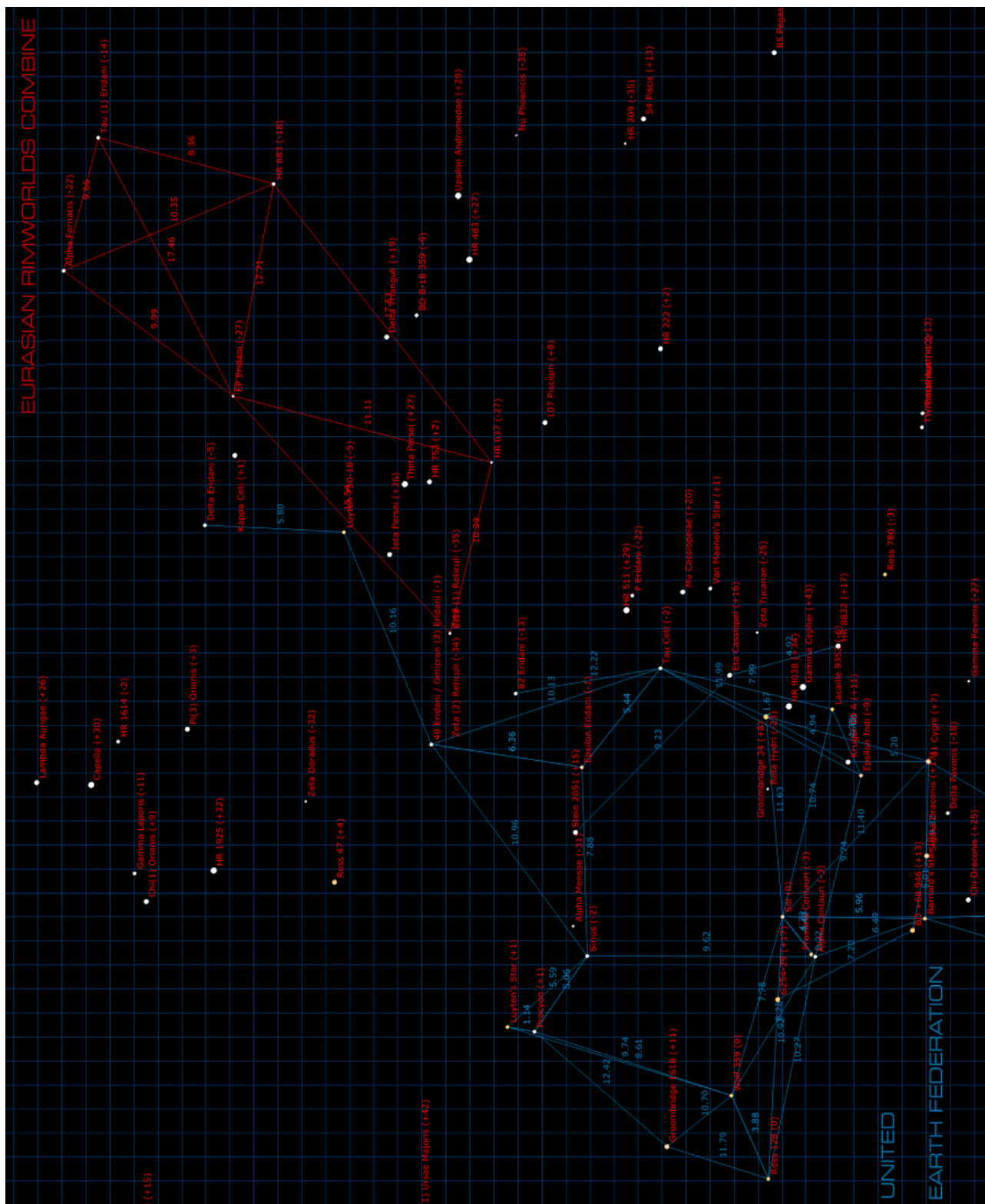
The corporation operates under an ironclad doctrine, employing any means necessary to secure and perpetuate its unwavering power and dominion over the Outer Rim. Embracing cutting-edge advancements in cybernetics and cloning, the Eurasian Corporation relentlessly pursues the development of the next generation of expendable soldiers. Augmented with cybernetic enhancements, these soldiers are engineered to be highly adaptable, ruthless, and utterly loyal, embodying the ERC quest for ultimate supremacy.

Within the confines of the Eurasian Corporation's sprawling dominion, dissent is swiftly crushed, and individual liberties are sacrificed at the altar of corporate control. Propaganda and surveillance are wielded as weapons, ensuring an atmosphere of fear and conformity among its subjects. The corporation's vast reach extends beyond the realms of industry and military might, with its tendrils delving into sectors such as information technology, media, and entertainment. By exerting an insidious influence over mass media and public perception, the Eurasian Corporation skillfully manipulates narratives to maintain its stranglehold on power.

Facing the Eurasian Corporation as opponents is a daunting task, as their unrelenting pursuit of dominance knows no bounds. The corporation's forces are formidable, composed of highly trained soldiers augmented with cybernetic enhancements and backed by state-of-the-art weaponry. Cloning technology serves as a sinister tool, allowing for the rapid replenishment of expendable soldiers and the preservation of their ruthless efficiency on the battlefield.

The ERC Star Sector

While there are numerous starship lines in the Rimworks, all are combined under ERC Starways A.G.S., a combination regulatory body and corporation which oversees the operation of all starship routes in the Rim. The ERC holds the monopoly on all commercial starship services in the Rimworlds and sets routes, prices, etc., which individual members must follow.



The Free Worlds Alliance

by Wikipedia, John Ossoway, Ed. Simbalist & Terry Chessman

"This is not a war for the independence of one or two colonies, but for the independence of one nation."

Eli Navarro – ex colonial administrator

The origins of the FWA are bound up in the second Exodus period of human colonization (c. 2166-2196). These immigrants were to form the mass of the colonials scattering across a volume of space over 50 light-years across. The early phase of Mankind's settlement of worlds beyond the Solarian StarSystem was not the happiest period in the race's history. The safety of the colonists was utterly ignored; production of food and raw materials was all that counted. Impossible production quotas were imposed, with savage penalties for failure to meet those quotas. Ridiculously low prices were paid for colonial products, while correspondingly exorbitant prices were charged for imported manufactured goods from Terra. Since imports were generally vital items needed for the very survival of the colonies, the bitterness of the colonials could only reach explosive levels.



In 2257, the colonies of the Herculis Cluster declared their independence from the Federation.

The Foundation of The Free Worlds Alliance

The economic potential of the OutWorlds was obvious to anyone with imagination and intelligence. Blocs of companies and wealthy entrepreneurs pooled their resources to colonize new worlds, sometimes charging stiff settlement premiums to immigrants seeking a better life. Others with still more imagination acted to establish extensive mining, agricultural, and manufacturing complexes on worlds rich in natural resources and fertile soils to provide the products so urgently needed on Terra. Thus began the First Exodus (2115-2135).

The first Colonial Expansion to the OutWorlds was launched by a conglomerate of 11 companies in 2115. It was the first of a series of superbly planned, financed, and equipped private commercial ventures on a major scale. Almost 700,000 colonists were transported in nine waves to establish a completely self-sustaining colonies on the worlds of the Ophiuchi system in the Herculis Cluster. The corporations found that, with proper treatment, their new employees transferred intense loyalty to their employers. To the last man and woman, the exiles from Terra hated all 'statist' governments that fenced in people with a treacherous morass of unending laws, regulations, and taxes, the whole administered by self-important bureaucrats who delighted in mountains of red tape. They simply wanted to get on with the job, unfettered by authority. Since their desire for freedom to work and prosper exactly suited the aims of the entrepreneurs, the Terran exiles were prime candidates for the Ophiuchi colonies.

The Free Colonies prospered. The products of the finest minds in human entrepreneurial circles, the colonies boasted operational mines and factories within ten years. A growing stream of food-stuffs, manufactured goods, and raw resources moved from the Ophiuchi Worlds to Terra, the Federation, and a number of the other colonial OutWorlds. By 2130, eleven worlds had been settled in the Herculis Cluster, and almost eight million colonists had been attracted by the unlimited opportunities for advancement and profit.

The Trade Control Act of 2254 struck at the very survival of the Free Colonies. It imposed ruinously high import duties on all Free Trader goods landed on the Solarian Outer Planets and the colony worlds of the Federation. It required that all goods traded in UEF space be carried in vessels of Solarian registry. Finally, to encourage colonial compliance, the Trade Control Act granted preferential tariffs and subsidized shipping rates to all colonies trading exclusively with the Solarian Core system.

The response of the Free Colonies to this restriction of trade was to convene a Congress on 18 Scorpii in 2255. Representatives from Gamma Serpentis, HR6806, Zeta Herculis and 36 Ophiuchi attended the conference. On September 5, 2255, the delegates declared the independence of the Herculis Cluster from all statist regimes, resolving to defend their freedoms with their lives and fortunes against all tyrants and oppressors everywhere. The First Congress also drafted the famous Alliance Articles of Trade and Commerce, the body of the laws and the Constitution by which the Free Worlds Alliance would be governed.

The leadership of the Federation were mildly amused by these proceedings. With a powerful BattleFleet and a dominion encompassing almost 85 colonies and growing, they saw little to fear from a tiny, if defiant, competitor like the Alliance. But the FWA struck back in its own way. Free Traders entered into blatant smuggling operations in the colonies, expending funds to bribe corruptible customs officials to look the other way while contraband was landed by the shipload.

The ICA issued orders to the UEAF to fire upon all FWA vessels discovered in space. Their very presence was to be construed as evidence of criminal violation of the Trade Control Act. Running battles between FWA craft and UEAF vessels began occurring with disturbing frequency.

In 2257, the friction between the FWA and the Federation reached the explosive point with the Colonial sedition. However, the Alliance found that it did not have to move overtly because the Eurasian Rimworlds Combine suddenly and dramatically became engaged in the First Interstellar War (2258-2260). The ERC, founded in 2258 and comprising 10 colony worlds, espoused an expansionist policy in keeping with its historical roots on Terra.

For its part, the FWA remained neutral for the first year, content with massive smuggling activity throughout the Federation and trading strategic materials, armaments, and military equipment to the hard-pressed ERC. At the same time, the Alliance embarked on a naval building program to up gun its best merchantmen so that they could function as armed merchant cruisers and commerce raiders. It also launched a small but powerful BattleFleet to defend the home planets in the Herculis Cluster.

The Security Council of the UEF was angered by the Alliance actions, and a full battlefleet was withdrawn from the ERC campaign and dispatched toward the FWA worlds in 2259. Under the command of Fleet Admiral 'Bloody' John Vincent, the UEAF knifed into the Alliance and conducted a campaign of punitive terror raids against outpost colonies and Alliance protectorates unparalleled to that point in human space faring history. Altogether, some 16 FWA colony worlds and trading partners were devastated by Admiral Vincent's scorched planet tactics, with almost 9 billion casualties.

Outrage and fear reached crisis levels in the Alliance, and total mobilization was ordered by the Congress. Individuals and corporations raised volunteer militia battalions at their own expense, and hundreds of merchant craft were released for long-range commerce raiding operations in UEF space. While the small Alliance BattleFleet struggled to slow down and contain the powerful Federation armada, Alliance privateers men fell upon UEF shipping with elan and ferocity. UEF losses to the Alliance privateering actions began to mount alarmingly, and owners and merchants began clamoring for escorts for their vessels. Then, on April 22, 2259, the Alliance armed merchant cruiser LSS Blackstone's Folly dropped out of hyperspace at the fringe of the Solarian Core System itself to capture the 50,000t cruise ship Sirius Star!

It is perhaps ironic that an economic weapon was responsible for the survival of the Alliance. The incredibly stupid decision on the part of the Federation leadership to recall Admiral Vincent's task force when it was on the verge of destroying Alliance power forever must stand as a great blunder in the annals of human military history. For it removed at a stroke the only real threat to the Alliance. Dispersed as a fighting force to be employed piecemeal as convoy escorts, Vincent's fleet was denied its victory literally days before a decisive assault on 18 Scorpis itself was to begin.

The Alliance itself was crippled by its losses and the damage to its factories and resource planets. Commerce raiding was curtailed after the recall of Vincent's fleet in order to avoid provoking the return of another punitive expedition. Just enough pressure was maintained to encourage the UEF to continue its close escort policies instead of massing its power against the Alliance. The smuggling continued unabated, as did material support of the embattled ERC.

Just as incredible, the ERC survived repeated hammer blows against it by the superbly trained and equipped UEF Forces as they ripped a swath across the Outer Rim Territories. Once again, UEF politicians hamstrung their military command with ill-informed directives which repeatedly snatched away final victory from the grasp of the UEAF. What should have been stunningly decisive battles were turned into savage, prolonged campaigns on over 20 worlds. Again, UEF forces were dispersed and diverted to a multiplicity of objectives rather than being concentrated for massive local superiority.

As it was, the ERC lost almost a quarter of its outlying colony worlds outside the Outer Rim sector, and five of its major colonies in the StarCluster were solidly in UEF control when the suicide Raid of 2260 at Omicron² Eridani brought an abrupt end to the fratricidal insanity.

Exhausted by several years of warfare, Humanity finally settled down to a period of peace and reconstruction.



The Government of The FWA

The very nature of the Articles of Trade precludes the notion of a sovereign state. Thus, in a very real sense, there is no form of government at any level in the FWA! Sovereignty is vested directly and entirely in each corporate citizen, whether a private individual or a corporation.

The FWA is notorious for its anti-statist attitudes. Statism is defined as giving support to any political system or philosophy which sets up a mythical entity called The State against the individual or corporation. Statism is considered to be immoral and intolerable, Men and corporations live and deal with each other by freely and knowingly entering into relationships governed by a universal social/commercial contract-the Articles of Trade. No government can alter the terms of their lawful and honorable agreements without the consent of every sentient commercial being (Human, Bioroid or Transhuman) involved in the matter. Otherwise, interference is grounds for indictment for fundamental breach of the Articles. That is outright treason against all sentient commercial beings everywhere and of every race, whether citizens of the FWA or not!

Let it be clear: the FWA does not recognize the right of any government to make and enforce laws without the consent of those who are affected. It does not recognize the right of government to 'confiscate' (read 'tax') individuals or their property and profits or to expend such monies without the personal consent of the individual. It does not recognize the right of government to regulate what an individual may do or not do with his property. (Property here is interpreted to include the person of each individual, not just what he owns). In short, unless a person personally agrees, government is powerless to act legally in any matter affecting him personally.

The FWA thus has no government. What it does have is a national corporation which co-ordinates and directs the broad affairs of the Alliance and its members. The powers of the government are strictly limited. It can make laws in a narrow range of areas, carefully set out in the Articles of Trade. But these laws are subject to ratification by the Planetary Directorates of each member planet of the Alliance before they go into effect. It is charged with maintenance of the Alliance BattleFleet, a modest sized naval force which forms the nucleus of the Alliance's defense and otherwise acts as an anti-piracy patrol. It has a judicial function – perhaps its most important single role – and can arbitrate any legal matter brought before the tribunals of law. This arbitration function is applied not only in private matters, but also in all disputes between member planets. Finally, it has the power to administer all Alliance colonies and protectorates.

The government of the FWA is the Congress, which sits in the 18 Scorpius star system on Ernesto Prime. The Congress is composed of two Houses, the Senate and the Assembly, two Consuls or chief executives, the Tribunes of the People, the Tribunes of Law, and – In periods of extreme emergency – and Supreme Commander.

THE SENATE

The Upper House has 200 Senators selected by a complex proxy system based upon the economic worth of all shares in FWA corporations on registration day, and also upon the donations voluntarily made by FWA citizens to the maintenance and support of the nation. In short, each citizen's voting weight is directly related to the value of the shares he holds in various companies and also his willingness to contribute to the running of the FWA. Great Patrons also hold the proxies of their Clients as a matter of course. In the case of corporate citizens, the Board of Directors of each company can vote proxies according to the shares the company controls in itself or in other companies. Clearly, the wealthier a citizen is, the more political power he possesses. Senatorial campaigns thus closely resemble the proxy fights which characterize the struggles inside any corporation for seats on the Board of Directors. Each candidate must scramble to amass the support needed to win his seat. Elections are held every year, with 20% of the seats up for re-election each year.

THE ASSEMBLY

The Lower House has 300 representatives or Assemblymen elected by the population at large on a regional constituency basis. The Assembly has no legislative powers, as all legislation is initiated by the Senate. It can advise the Senate, however, and it serves as a sounding board for public opinion which most Senators take very seriously.

THE TRIBUNES OF THE PEOPLE

The Assembly has, as its most important function, the power to elect 10 Tribunes from its membership. The Tribunes sit in attendance at all Senate meetings. Any Tribune can rise and say 'Veto!' ('I forbid it!') to any measure passed in the Senate. The Tribunes represent the general fear in the Alliance that laws can be easily passed which infringe on the sovereign freedom of individuals. Thus the Tribunes are extorted by all – even the Senators – to be Watchdogs on the Conscience of the Senate and People of the FWA. Since great pains are taken to see that the most honorable and wisest heads are appointed to the Tribuneship, it is rare that a veto is arbitrary or foolish. In effect, the job of the Tribunes

is to say 'think again', and the system works well in practice. The Tribunes serve for six months, then step down and cannot serve again until re-elected in a general election for another term in the Assembly.

THE CONSULS OF THE FWA

In a republic, the Consuls would be equivalent to Presidents. Only this is the FWA, and they serve essentially as co-chairmen of the board. The Consuls are elected by popular vote of the citizenry-at-large from a list of candidates submitted annually by the Senate. The two Consuls thus elected serve for one year. During their terms, they alternate monthly, one chairing Senate meetings and the other administering the small but efficient bureaucracy of the FWA organization. Upon completion of their term of office, the Pro-Consuls are granted a Governorship in one of the major colonies for a period of 3 to 5 years, where they share in 5% of all business carried on in the colony during their administration.

THE TRIBUNES OF LAW

The Senators and Assemblymen appoint a number of their members to the various judicial committees of the FWA after they have served a term or two in office and wish to retire from public life. A great many functions of FWA government are judicial in nature. Disputes between contracting parties are submitted to the Tribunals for a legal consultio or opinion. The disputing parties, though not bound to accept the opinion of the Tribunals, are well advised to do so. The justices are among the foremost experts on FWA law, as embodied in the Articles, and their consultios have very strong moral force. The justices are also very powerful figures in their own right, and they sometimes take personal offense when their decisions are not respected.

The Tribunes are selected by the Senate and serve for ten-year terms, which may be renewed every three years thereafter by Senatorial decree. (The Assembly has the right to nominate one-third of the justices, subject to Senate approval). The selection of the justices is a most serious matter, and the Senators and Assemblymen set aside personal and corporate rivalries to make the best possible choices. Interpretation of contracts in the light of the Articles of Trade is basic to the continued existence and prosperity of the Alliance.

SUPREME COMMANDER

The office of Supreme Commander does not normally exist in the FWA. It is activated only when the FWA, as a corporate body, is declared by the Senate to be in a state of war. By emergency decree, the Senate can declare the existence of a clear and present danger of the gravest magnitude which threatens the very existence of the FWA. The Supreme Commander is appointed for a six-month term, which can be renewed by the Senate until the emergency has passed. The Supreme Commander holds absolute power over all citizens and resources of the FWA, military and civil, without right of appeal.

FWA Planetary Governments

The government of a full member planet of the FWA closely resembles the FWA Congressional organization. There is an Upper house of the Equites (Merchant Princes), elected by proxy system by citizens of the planet who hold shares in planetary-based corporations. The number varies, but there are usually from 50 to 200 Equites. Of these, ten are elected to the Planetary Directorate, and one becomes Chairman of the Board. The Assembly Populares is elected by the plebian classes and has a purely advisory capacity. There are no Tribunes of the People.

The Planetary Directorate is charged with maintaining system defense forces and essential services which cannot be entrusted to purely private interests because of their vital necessity to all. The Directorate has no taxing powers, but it does have the ability to enforce a purely contractual user-pay tariff for any services purchased directly by any consumer. Defense charges are usually covered by landing fees at the planetary starports and by personal donations by citizens.

Most general services are available on the open market and are provided by companies specializing in that kind of service. A common example would be garbage collection/disposal, or perhaps light and power or water and sewage. Public transport, medical and hospital care, education and vocational training, even Fire and police services can often be obtained privately. Large corporations often maintain their own self contained communities, adjacent to industrial and office complexes. Thus most services which are associated with government in statist nations are available from one's own employer.

The Directorate does maintain a planetary police force and a security agency to work with the private corporate police and security units. Whenever jurisdictions have to be crossed (from one company's property to another's), the Directorate Law Enforcement Office will provide an officer to make the incursion lawful. For no private corporate

policeman can enter the property of another corporate or private citizen not a client of the corporation without committing trespass. Of course, in public areas, private corporate police may engage in their duties and pursue or arrest anyone breaching the rights of a client or any innocent citizen clearly requiring assistance (as in the case of a mugging). Reasonable force – meaning stunners and tangleguns – is called for, unless the lawbreaker is clearly armed and seems prepared to open fire. If engaged in hot pursuit, private police may enter on property other than that of their own company and clients, and the corporate police of the other company are obliged to co-operate in apprehending the suspect. At that point, the legalities of the intrusion are debated at the local precinct of the Directorate Police.

On the surface, it might seem that FWA governmental arrangements are chaotic and haphazard. In practice, they work out quite well. In the FWA, everyone takes care of his own. The effectiveness of the system will become clearer when the patronage system is explained.

FWA Law

Under the Articles of the FWA, there is no law Save the Articles of Trade, and all other laws (such as Planetary Ordinances and Regulations, corporate regulations, etc.) must be in accord with the Articles. Breach of the law is actually breach of contract. In the case of minor offenses, a wide range of options are open. These range from a warning to fines and/or imprisonment or workforce duty for a short period of time. Serious offenses are regarded as open treason against the corporate body of sentient commercial beings. Treason can bring heavy fines, long terms of imprisonment, exile, and – in extreme cases – the death penalty. Treason is often referred to by the Latin term 'maiestas'.

It must be understood that there is no such thing as The State in the FWA. The courts do not, therefore, have any real power in matters not directly involving the peace, order, and security of the FWA. The courts are effectively referees in most legal matters. Any party to a legal matter has the option of ignoring the court procedure.

Parties to any dispute, including criminal matters, can agree upon any third party to act as an arbitrator or judge. However, once they do so, they are contractually bound to accept his decision. At any time before the judge hands down his 'consultio', the parties can agree upon a settlement between themselves. Even criminal cases can be resolved in this manner.

If the loser in a legal matter refuses to accept a judicial consultio, whether the justice is a FWA Tribune of the Law or just a private arbitrator, the 'denier' is held to be caught in maiestas because he has repudiated the most solemn of all contracts – the bond between sentient commercial beings which is the basis of the Articles of Trade.

If an alleged offender refuses to go to court, the aggrieved party has the right to invoke the Code Duello before any magistrate. The Code Duello is a declaration of personal war. The Code binds the party to the dispute to a carefully delineated pattern of behavior. Notice must be given to all third parties that a state of armed conflict exists between the opponents, so that innocent parties may stand clear. No injury to the persons or property or innocent parties may take place. If it does, full restitution plus heavy penalties are assessed.

When formal business matters are involved, corporate war can be declared. In effect, armed conflict involves actual battle between the private troops of the contending parties. The sides are precisely matched and armed – in anything from platoon to regimental strength – and the whole event is conducted according to the Mercenaries' Code. TriVee coverage is a usual feature of such events. If a private citizen (whose legal status is that of a personal service corporation) has a dispute with a much larger organization, he may find that his costs of prosecuting the war might be picked up by a patron-sponsor if the dispute is exciting enough to warrant TriVee coverage and public interest. In effect, the sponsor exchanges the service for advertising rights.

The FWA Colonial Service

All protected planets and colonies under FWA Patronage fall directly to the administration of the FWA Colonial Service. Most of the revenues available to the FWA, outside of personal donations (which are made in lieu of taxes), come from the colonial administrations. Each planet has a Governor drawn from the Pro-Consuls or from other high government officials retiring from office. The Governor has powers equivalent to those of a Planetary Directorate. All activities of FWA citizens on a colonial world are subject to review and regulation by the Governor and his staffers, who represent the FWA as sole Patron-Major of the planet.

To aid the colonial Governors, there are military, naval, and police units to enforce FWA ordinances, as well as other civil authority personnel. FWA citizens and corporations operating on a protected planet are under strict Client relationship and must accept, as terms of the contract licensing their activities on FWA territory, all regulations governing their activities.

Charter Colonies are a different matter. FWA authority extends only to external affairs, the administration of the StarPort(s), and the coordination of the Defense Forces. The internal government of Charter Colonies is conducted by a colonial Planetary Directorate.

The Defense Establishment of The FWA

In some respects, the FWA is perhaps the weakest of the human star nations in that it maintains a relatively small, if very professional and well equipped BattleFleet. But the FWA measures its strength in its huge merchant fleet and the intimate knowledge of her captains of a substantial portion of the Herculis Cluster. Further, the FWA possesses a surprisingly effective security and intelligence network because virtually every private corporation has internal security arrangements which can be coordinated with those of Planetary governments and FWA agencies.

The security and defense of the FWA is one of the most important responsibilities of the FWA government on 18 Scorpii. Yet security and defense are maintained, not through taxation, but rather by the personal donations from public minded individuals and corporations! Being a corporation in its own right (there is no other legal entity in the FWA, except for personal citizenship), the FWA hires out the services of some of its military establishment to help defray its expenses. It also enjoys the benefits of being a Patron-Major of all colonies and protectorates directly under FWA administration.

This may appear to the outsider to be a risky and haphazard way to provide for the security and defense of a major interstellar power. In practice, it works quite well. The average citizen contributes about 10% of his income to FWA institutions, and often more in times of grave emergency. In the FWA, public responsibility is a virtue, and many willingly give generously of their wealth to support a strong naval and military posture. Indeed, much public honor and prestige is gained by performing one's public duty in this way. Also, each member planet of the FWA maintains its own defense and security forces, while individual companies often have at their disposal significant military and naval capacities because of the nature of both their trade and the legal risk of private war between them.



The Central Directorate

The Central Directorate of FWA Defense and Corporate Security is one of the most powerful agencies of the FWA government. It coordinates all naval and military operations in peace and war. During times of emergency and war, the Directorate has sweeping powers under the FWA Articles and can mobilize and requisition whatever resources and personnel required to counter the threat to FWA survival. When the crisis is extreme, the Directorate may be headed by a supreme Commander, appointed by Senatorial decree, who replaces the Consuls normally in charge of the Directorate.

Starfleet High Command

The regular naval forces of the FWA and, in time of war, the reserve forces as well, are under the direction of the Bureau of StarFleet High Command. The Bureau is divided into:

FWA BATTLE FLEET

The heavy units of the FWA of StarFleet are contained in the BattleFleet – actually composed of a number of Fleets with warships capable of standing 'in line of battle' and slugging it out with the best in opposing paxies. The BattleFleet is maintained in reserve during peacetime, usually stationed in the heart of the Herculis Cluster. In wartime, it is deployed to counter the thrusts of major units of the enemy into sensitive regions of FWA space and to mount major counter-offensives. However, the BattleFleet is not so numerous and powerful as equivalent forces of many neighboring

interstellar groupings, and therefore it will not be risked in operations having only a limited chance of success. First and foremost in FWA naval doctrine is that the BattleFleet must always remain a fleet-in-being, a constant threat to the enemy because it can, at the same time, cover the Home Planets and deliver savage blows at will to vulnerable regions in the enemy's defenses. Loss of the BattleFleet or the incurring of heavy casualties and battle damage are regarded as disasters of the worst kind.

STARFLEET MARINE CORPS

The Fleet Marines are highly professional regular troops attached to StarFleet Command. They are superbly trained and equipped for shipboard action, planetary assault, deep-penetration commando raids, and sustained ground action. Every naval unit curies a Marine Commando as part of its basic crew complement (a commando here means any unit from a platoon to a full regiment, and large vessels may carry support artillery and service units as well). In addition, regiment, brigade, and division-sized units are available for major operations, convoyed to battle areas in fast naval assault transports.

STARFLEET LOGISTICS & SUPPLY

This Department of the StarFleet is charged with maintenance of the fleet and thus manages starbase installations, supply vessels, and general procurement. In wartime it may mobilize elements of the merchant fleet for supply duties.

BUREAU OF NAVAL INTELLIGENCE

The BNI has the task of assessing the big picture for the StarFleet and the Central Directorate. All naval, military, and other intelligence gleaned from all sources, including the Bureau of FWA Security and the Foreign Bureau will ultimately be forwarded to this very influential arm of the government defense services. Recommendations of the BNI are taken very seriously, and all FWA foreign policy and strategic planning are based on the advice given by the BNI. The Special Branch of the Bureau is concerned with active espionage and sabotage operations in foreign and enemy territory and might be considered a pocket-sized version of BRINT in the UEF.

FWA PATROL FORCES

The Patrol is actually the largest single branch of the StarFleet and is divided into three components: the Patrol proper; the defense spaceforces of Member StarSystems; and the commerce raiders and privateersmen of the Naval Reserve Strike Forces. Each of these groups is dealt with separately below:

The FWA Patrol:

In many ways the equivalent of the Federation's famous Federal Law Enforcement Authority, the Patrol consists of light units of the fleet-fast assault corvettes, destroyers, light cruisers, and starfighter cruisers. It also possesses a number of Q-ships employed specifically to attract space pirates and enemy commerce raiders into range of their heavy-calibre cruiser guns and torpedos. In peacetime, the Patrol is largely occupied with the tasks of policing the spacelanes and suppressing piracy. In this duty the Q-ships, disguised as slow and helpless freighters, play a most effective role. Also, anti-piracy operations are closely coordinated with the BNI, which attempts to plant agents in areas frequented by pirates on R&R or even to penetrate pirate organizations with agents posing as pirates, so as to obtain intelligence on locations of pirate bases, ship and crew strengths, and planned raids. The Patrol also has the duty of showing the flag in the far-flung colonial possessions and trade protectorates of the FWA. In wartime, the Patrol functions as a fast reaction force (nicknamed The Fire Brigade) to reinforce threatened areas quickly. It also provides support for the BattleFleet, conducts scouting sweeps, and guards naval lines of communication. Units of the Patrol are also used to mount commando-style raids with StarFleet Marines or to land agents of the BNI on enemy-held planets.

Starsystem Defense Forces:

Under the Articles of Trade, each full Member Planet of the FWA is obliged to provide for the defense of its StarSystem. Depending upon the wealth of the Member, a force of largely light warships will be maintained to oppose enemy action in the area and to provide reinforcements for the StarFleet, if required. As economy measures, many Members provide for large numbers of StarFighters, reasoning that the craft can adequately patrol the system perimeter, react speedily to piratical activity or commerce raiding, and do significant damage with torpedo fire. Or, again, larger vessels are often built without FTL drives to reduce overall costs, the reasoning being that they are essentially system defense vessels anyway and do not need to go anywhere else. As a consequence, rarely more than 1/3 of the StarSystem Defense vessels have FTL capability. The Member must also provide for adequate militia Marine forces to fight anywhere in the StarSystem. StarPort defenses and orbital forts are optional, but rarely will a planet be found without fairly heavy close-in anti-ship batteries and torpedo launchers.

Naval Reserve Strike Forces:

About 20% of the merchant shipping in the FWA is fast and modern enough to be fitted out for commerce raiding. The benefit to the owners in added defense against pirate attack cannot be understated. However, in time of war, all such vessels are liable to mobilization in the Strike Forces for the duration of the conflict. The commerce raiders then operate independently in assigned regions of enemy space, or else in concert with support/command units of the Patrol to conduct 'wolf-pack' tactics. These raider Task Forces are used particularly to attack convoys, and starfighter-cruisers and destroyers of the Patrol typically are present to provide the punch needed to decoy or take out the escorts. It should be noted that the commerce raiders are all naval reserve vessels and therefore are totally under naval discipline and command. In addition, private shipowners may obtain Letters of Marque which legally entitle them to raid enemy commerce and take prizes. Privateersmen are not naval vessels, however, and all operations must be supported by the owners, who stand to make considerable profits from the sale of prizes taken.

Mercenary Armed Forces:

There are a fairly large number of corporate mercenary units in the FWA. In peacetime, the Mercenary Companies hire out their services to corporations or just about anyone else who requires 'muscle', regardless of nationality. The Mercenaries form a body of trained troops who can be engaged by StarFleet or Planetary Directorates to augment their forces. It should be noted that the quality of equipment and reliability of such troops is exceedingly spotty, varying from excellent to very poor indeed. Some are little more than bands of thugs and freebooters.

Bureau Of Security Services

The internal security and intelligence-gathering requirements of the FWA are coordinated and directed by the BSS or the Bureau, for short. The Bureau has a close relationship with two private companies specializing in security operations as well as with the security organizations of Planetary Directorates and private corporations. In wartime, the Bureau has extensive powers and can issue directives to subordinate agencies. In peacetime, its powers are relatively curtailed, but it may indict any planetary or corporate officer for withholding essential intelligence bearing on the general security or survival of the Mercantile FWA. Thus a fair bit of information filters up, as no one wishes to face a charge of 'treason' if it later comes out that he knew something and kept quiet.

The Department Of Security Coordination

The DSC (laughingly referred to by wags as the Department of Sanitation Control) is no joke to enemies of the FWA, for its agents occupy much the same position as those of BOSS in the Federation. The eternal bogey of the DSC or Security is statist plots against the FWA, and it maintains an assassination team to secretly and quietly deal with real or imagined threats to the internal security of the FWA. The team directs its attention largely to the elimination of foreign agents on FWA territory or trading partners. However, the Security Commando occasionally becomes overzealous and removes suspected FWA citizens from time to time. (On several occasions, the Bureau has been subjected to purges of members who themselves have exhibited a statist involvement with politics and the support of certain political leaders in the FWA by eliminating rivals. The BNI keeps a close watch on the Bureau, and rivalries between them equal those between the Federation's BRINT and BOSS). The main function of the Bureau, however, is to coordinate the activities of the security services of the various Planetary Directorates and private corporations in time of war or national emergency, and to gather and assess intelligence forwarded by them on internal threats to FWA institutions and installations. It is, in effect, a counter-espionage organization.



New Careers

This chapter presents a selection of optional new professions for your Adventurers, all of which are inspired by the FWA setting. The list is by no means complete, and GMs are encouraged to expand upon what is here as they see fit...

BLACK MARKETEER

Despite the best efforts of FedPol and FLEA, there is a healthy black market in the Outer Rim. The Black Marketeer is a shrewd individual operating in the shadows of the Outer Rim, providing a vital service for those seeking illicit goods and services. They navigate the dangerous world of smugglers and criminal syndicates, procuring and distributing illegal merchandise ranging from weapons and drugs to forbidden technology and exotic goods. Their network of contacts allows them to move goods quickly and discretely, evading the watchful eyes of law enforcement and other unwanted attention. Despite the inherent risks, the Black Marketeer is driven by profit and the thrill of living on the edge of society.

Occupation Skills:

Computer (Operation), Credit Rating, Conceal, Data Analysis, EVA, Hide, Sneak, Bargain, Fast Talk, Streetwise, Gun Combat (Pistol), Law (Criminal), Evaluate, Psychology, Vacc Suit, Unarmed Combat plus 2x other skills to reflect personal field of expertise.

Background:

E\$10,000pa income from illegal activities; E\$5,000 in personal equipment; Rented accommodation in one of the FWA colonies; 2x underworld contacts (GMs' discretion).

FREEHAULER

A Freehauler is an independent operator who owns or operates a starship and uses it to haul cargo from colony to colony. Unlike larger shipping corporations, Freehaulers often take on smaller jobs and operate on a more personal level with their clients in and around the FWA star systems. They have to be resourceful, adaptable, and able to navigate through various regulations and restrictions. Many Freehaulers choose this path for the freedom it offers, but it also comes with risks, such as encountering pirates or running afoul of local authorities.

Occupation Skills:

EVA, Streetwise, Speak Other Language, Astrogation, Computer Operation, Engineering, Evaluate, Mechanical (Aerospace), Pilot (Aerospace, Spacecraft), Vacc Suit.

Background:

Freehaulers are either salaried (E\$10+2d6x1000pa salary plus profit sharing) or have part-ownership in a spacecraft along with the rest of the crew; personal items related to profession; 2x contacts.

GANGSTER

A career criminal who operates as a member of a criminal organization, such as the Estrella Negra. They are typically involved in illicit activities such as extortion, smuggling, and racketeering. As mid-level members of a criminal gang, they have access to resources and equipment provided by their employers (at GMs' discretion). Their primary focus is to generate profit and expand their organization's power and influence, often through the use of violence and intimidation. Due to their criminal activities, they are often pursued by law enforcement and rival gangs, requiring them to be constantly on guard and ready to defend themselves.

Occupation Skills:

Computer (Operation), EVA, Bargain, Fast Talk, Interrogation, Leader, Streetwise, Gun Combat (Pistol), Law (Criminal), Evaluate, Psychology, Vacc Suit, Unarmed Combat plus 2x other skills to reflect personal field of expertise.

Background:

E\$20,000pa income from illegal activities; E\$10,000 in personal equipment; Rented accommodation in one of the FWA colonies; 2x underworld contacts (GMs' discretion).

SPACE GANGER

Space Gangsters are typically young and reckless, often drawn from the underprivileged classes in the FWA colonies. They are known for their violent tendencies and willingness to engage in criminal activities such as theft, vandalism, and extortion. Many Space Gangsters are recruited by larger criminal organizations as foot soldiers or enforcers, while others

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form their own small gangs and engage in turf wars with rival groups. Space Gangers are comparable to the street-gangs of Earth, except with additional skills to reflect the fact that these thugs' streets sometimes are the cold hard void of space.

Occupation Skills:

Dodge, EVA, Unarmed Combat, Zero-G Combat, Bargain, Streetwise, Computer (Operation), Evaluate, Psychology, Vacc Suit, Conceal, Devise, Gun Combat (Hand Gun), Club.

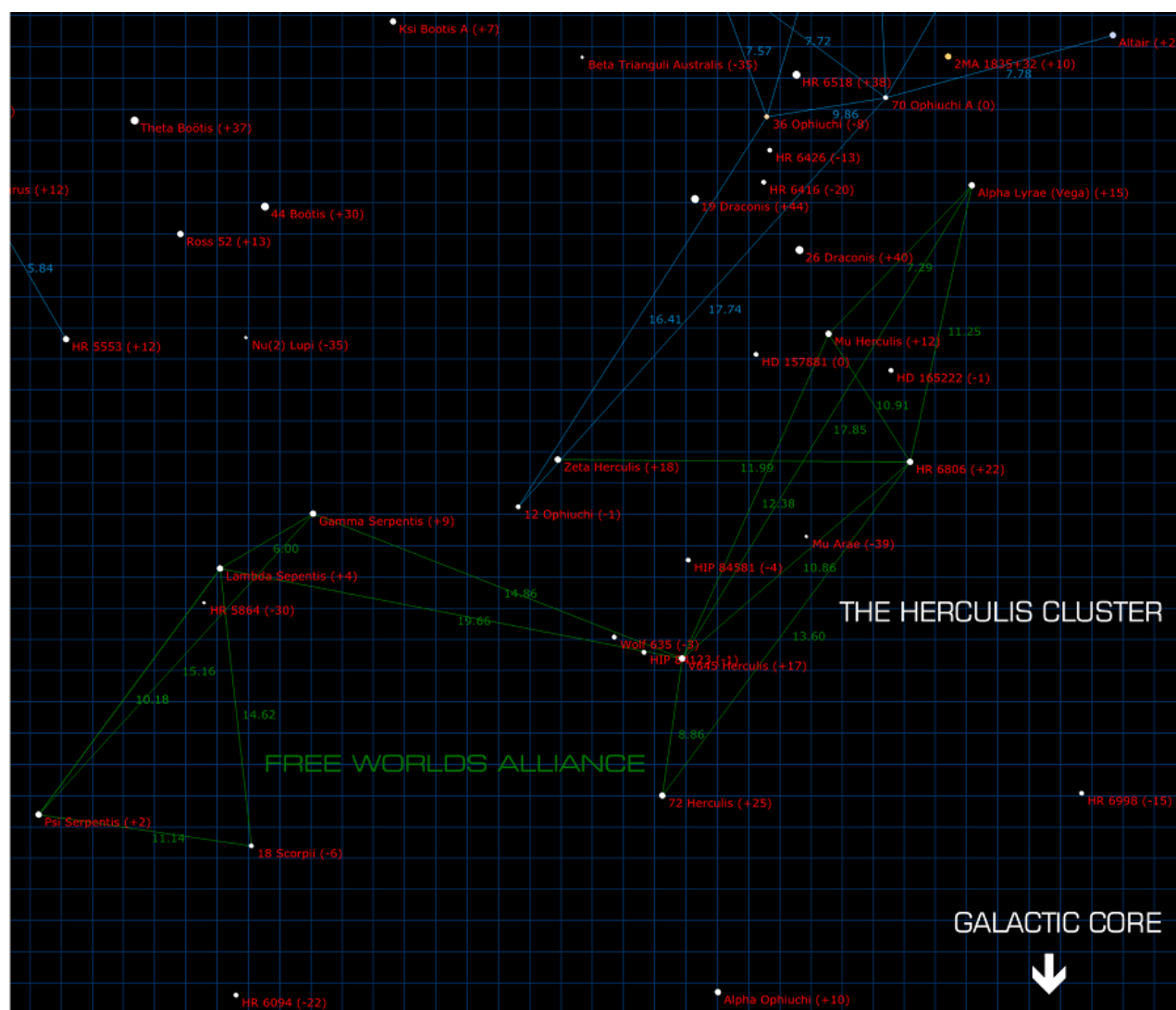
Background:

Personal items relating to profession; Vacc Suit.

The FWA Star Sector

Dozens of small, independent star lines operate from most FWA planets, with a great many venturing far beyond the Hercules Cluster. Bookings for long journeys can prove a bit chancey, but many of the independents prove quite helpful in arranging matters by referring the traveller on to other Free Traders, so that eventually even the most obscure destination can be reached. Very long hauls often can be made at exceedingly reasonable rates, as the Free Traders often are anxious to fill empty berths, particularly on intersector voyages. However, few independents cruise above 10 LY, so the traveller should be prepared for journeys of long duration.

Within the Hercules Cluster, rates are highly competitive, and virtually all starlines have the same base rates. These, of course, can often be talked down somewhat (-10% to -30% reduction) if one is not in a hurry and books passage with slower and smaller carriers. Of course, in such instances, the accommodations are often not the best, and the vessels themselves might be the classic tramp starships, but if economy is a necessity that may prove to be the best bet.



The Final Frontier

by John Ossoway, Andy Edwards, Stephen Mills, Ilan Rosenstein, Chas Blackwell, Graham Raynes,
John Snead, Bruce R. Cordell, Thorin Tabor, Ed. Simbalist & Phil McGregor

"Despite knowing the journey and where it leads, I embrace it, and I welcome every moment of it."

Dr. Louise Banks – Linguist professor

In 1903 the Wright brothers achieved the first powered flight. In 1911, men took to the air for the first time with the express intention of killing and so wrote the first chapter in the history of air warfare. It had taken man only eight short years to turn the realisation of an idyllic dream, the freedom of the skies, into an instrument of death.

As humanity expanded from Earth and conquered space, air warfare moved first into orbit, then into deep space. This document provides a brief introduction to space travel in the 23rd Century, and rules for running aerospace and space combat.

Space Travel

Space is vast. Just how vast is hard for us humans to visualize intuitively. An interstellar society exists under many unique restrictions as a direct result of this vastness. The most notable restriction is that this interstellar community consists of many island-planets scattered across an ocean of deep space, separated by unavoidable communication and travel delays. Even with technological marvels like the Foscolo Interstellar Drive and FTL communications, travel between these star systems takes weeks, if not months, and communications suffer delays of days if not weeks.

Because of these restrictions, the United Earth Federation is a remote, centralised government. Like the ocean-going civilisations of old, humanity has had to readjust, taking what some regard as a social step backwards. In-system communications remains near instantaneous, but communications with extrasolar colonies is as difficult as it once was to get messages from one side of an ocean to another on pre-20th Century Earth.

Interplanetary and interstellar travel is still an expensive business. Most people who travel are either company employees, military personnel or government staff.

FTL Instability

Spatial anomalies are irregularities in space-time and are a side effect of a risk factor, such as a hidden black hole or a dimensional rift where inhuman entities live. The following list of potential spatial anomalies is by no means exhaustive; it merely suggests the strange regions that explorers might encounter in the vast reaches of space.

Generally speaking, spatial anomalies are a few light-seconds up to a few light-years across. It's difficult for spacecraft to navigate within spatial anomalies, and they face many challenges if they attempt to (or are forced to) do so. The other space hazards described in this section are great tools to bring into play as a spacecraft attempts to chart a course through a region that might defy their sensors (hindering all related tasks by two or more steps), retard their progress, or simply defy basic physical laws.

Even though many different kinds of faster-than-light options are available, any use of FTL in a setting faces similar sorts of hazards at three different points: when first entering FTL, while in FTL transit, and when exiting FTL.

- **Entering FTL:** Whether engaging warp drive or passing into the mouth of a wormhole gate, complicating factors (such as being involved in a firefight, having a badly tuned drive or power source, or some other aspect of the spacecraft being in a poor state of repair), might require an astrogation roll, with the difficulty determined by the situation.

On a failed roll, any number of bad outcomes are possible, though the least dramatic is that the craft simply fails to enter FTL and cannot do so until the PCs determine the reason and rectify it (damage, broken device, too much energy in region from surrounding firefight, etc.).

- **In FTL Transit:** An astrogation failure or some weird instability in F-Space, or some other issue during FTL transit could occur. Usually, these instabilities are not something a pilot can avoid.

Instability could result in a spacecraft dropping out of FTL only partway to the destination, dropping out in some completely unrecognized part of space, dropping out at the right place but months or years late, or failing to drop out at all and thus continue to move through the abnormal spaces that FTL transit posits.

- **Exiting FTL:** The same sorts of complications could bedevil a craft exiting FTL as when entering. If so, an astrogation roll is required. However, on a failed roll, results include a collision, an inadvertent spray of high-energy particles from abnormal space acting as a particle cannon accidentally aimed at some other craft or space station at the destination location, or creating/falling into a spatial anomaly.

Anomaly	Effect
Ripple in space-time	Spacecraft knocked out of FTL, fusion drives stutter, crew and equipment damaged.
Temporal wave	Spacecraft knocked into distant past.
Edited laws of physics	Light moves as slow as a fast walk, gravity is repulsive, brain chemistry altered, etc.
Irregular “nebula”	Field of glowing plasma is made up of intelligent nanites, is an intrusion from an alternate dimension, is living tissue, etc.
Cosmic string	Line of dense space-time that, if moving, can act as a scythe powerful enough to slice a planet or sun in two.
Spatial rift	Unlike a wormhole gate, a spatial rift can send those that fall into one to alternate parallel dimensions, though these are unstable and just as likely to be destructive.

Spacecraft Categories

Spacecraft can be split into three distinct categories.

Aerospace

In the 23rd century, rotary and fixed-wing aircraft have been completely superseded by a generation of trans-atmospheric craft capable of operating to the limits of a planet’s atmosphere and beyond, into space. Compared to interplanetary craft they have limited operational range, and are usually restricted to orbital and suborbital operations. Jet engines and chemical rockets have been replaced by hypersonic scramrockets and fusion powered rockets.

Interplanetary

Halfway between aerospace and interstellar craft are the multitude of transports, freighters, cutters and yachts that have the range and capability for interplanetary missions. Most of these craft are not designed for atmospheric flight, being constructed for spaceflight only. Interplanetary vessels are obviously more numerous in star systems with multiple colony worlds. With no need for an F-Drive, they are much cheaper to produce than interstellar craft.

Interstellar

From the gargantuan commercial refinery craft, to the colonial transports and UEAF fleet vessels, the spacecraft built for interstellar flight are huge, the largest almost a kilometre in length. Much of their vast space frames are taken up by the fusion reactors and interstellar engines. Built entirely in space at orbital dockyards, Interstellar vessels are not capable of atmospheric flight.

Spacecraft Technology

Propulsion Systems

Propulsion systems in use by spacecraft in the late 23rd century range from the now archaic chemical rocket engines to the F-Drive.

Chemical Rocket Engines

Hydrogen, Nitrogen, Oxygen and other chemical fuel engines are simple liquid/gas fuel rockets. Engines of this type were created by humans in the early 20th century, and used for short range space flight, including on aerospace craft for orbital injection burn. By the 23rd Century, chemical rockets have been all but superseded by fusion drives and the reactionless displacement drive.

Scram-Rockets

Virtually all aerospace craft use scram-rocket engines for atmospheric flight, transitioning to fusion rockets for final trans-atmospheric acceleration into space. Scram-rocket engines combine the high thrust to weight of the rocket with the high efficiency of the ramjet engine, allowing operation from the supersonic to hypersonic regimes. Scram rockets are the ultimate development of rocket-based, combined cycle engine technology. The scram-rocket operates by drawing in air, which is then slowed and compressed as the vehicle speeds through the atmosphere. Fuel is added to the supersonic airflow, where the two mix and burn. The most common fuel used with air-breathing scram-rockets is liquid hydrogen.

Fusion Drive

Fusion rockets were first used to great effect in powering the Ares 3 Mars Mission in 2061. The Earth-Mars journey would have taken 259 days using a spaceship powered by chemical rockets, even when the 2 planets are in 'opposition' (which occurs approximately once every 780 days). The fusion drive powering the Ares 3 cut this time to just 63 days (just over 2 months). In the late 23rd Century, this same journey by a ship powered with fusion rockets takes less than one week.

Fusion drive uses a fusion reactor to heat and eject the fuel in an 'impulse' which creates acceleration. Depending on the type and efficiency, the power of the specific impulse can vary.

The standard fusion rocket uses the D-3He fuel cycle, with bucking coils to extract a magnetic flux tube from a toroidal magnetic fusion reactor and exhaust the thrust. There were many technical difficulties to be overcome during the development period, especially involving magnetic field strength and the size and weight of the coils, and this engine only became practical with the invention of lightweight supercompact fusion reactors during the mid-21st century, almost 30 years after the first commercially viable fusion reactor was built.

Fusion drives are still the most common form of propulsion in aerospace and interplanetary vessels, but in larger interstellar vessels they have been all but superseded by Reactionless Displacement Drives.

Reactionless Displacement Drive

Vacuum is known to contain enormous amounts of energy that might be tapped (zero point energy, or ZPE). Up until the end of the 21st century this was widely believed to be impossible, but a physicist named Hugo Foscolo changed that. The Foscolo Discontinuity vastly expanded understanding of unified field theory and it slowly became apparent that there were loopholes that could be exploited.

The Reactionless Displacement Drive exploits one such loophole, manipulating certain nuclear structures which enables Zero Point Energy to be 'borrowed' for an extended period of time. The Zero Point Energy is used to generate an electro-magnetic energy flow. Electro-mechanical displacement of said flow produces a net unidirectional displacement without *local* reaction. The momentum of the mass of the spacecraft utilising such a propulsion method reacts with the surrounding vacuum, gradually returning the borrowed energy to the Zero Point Field.

Though the drive obviously relies upon a power source to manipulate the Zero Point Field (usually provided by an onboard fusion powerplant), it is a purely electrical propulsion system requiring *no* reaction mass, i.e.: no propellant of any kind. Zero Point Energy cannot be used as a normal energy source, as the energy always has to be "returned" to the vacuum for the process to work.

A ship powered by a reactionless displacement drive can make the Earth-Mars journey in less than two days (Earth Standard Time).

Foscolo Drive (F-Drive)

The Foscolo Drive (or 'F-Drive') is the common name for the type of engine that allows spaceships to travel interstellar distances in a relatively short time period. A high-energy fusion reactor using Ununpentium (Element 115, more commonly referred to as Foscolium) as fuel powers a complex series of graviton beams, which in turn manipulate the Quantum Foam to create an effect now known as the Foscolo Discontinuity the opening of a Foscolian Traversable Hyperspatial Link that connects two points in space-time through an extra-dimensional region dubbed 'F-Space'. While in F-Space, the Foscolo Drive continues to function, generating a Foscolian Quantum Bubble around the ship, protecting it from the physics of this nine-dimensional region.

The absolute maximum distance a ship can travel in F-Space using Foscolium as fuel is 6 parsecs (19.56 light-years) before the quantum bubble begins to collapse. This effect is caused by a quirk of Foscolian Physics extra fuel does not matter once the Theoretical Maximum has been reached, the bubble collapses. Because of this limitation, it is common for ships to either carry spare fuel rods or be accompanied by fuel-tankers, to enable deep space refuelling operations. Military and UEFS ships, especially long range exploration or picket ships, carry significant fuel reserves to allow for extended operations, and fuel-tankers are a standard part of any significantly sized battlegroup, carrying enough fuel and specialized refuelling tugs.

Replacing the fuel rods in an F-Drive requires the drive to be powered down completely, an operation which can leave the ship adrift in space for up to 24 hours in typical conditions. A ship's F-Drive is intimately connected to its reactionless drive, and so during refuelling, only manoeuvring thrusters are available, leaving a vessel extremely vulnerable. As such, UEAF fleet protocol dictates that only one fleet capital vessel in a battlegroup should be refuelled at a time.

The major limitation on usage of F-Space travel is positional inaccuracy upon emergence, more commonly known as Emergence Point Variance. F-Space has been described as behaving in some ways like a complex turbulent storm-tossed sea, and the calculation of the exact exit point from F-Space is impossible due to quantum currents and eddies. This minimum inaccuracy is fixed regardless of distance travelled (perversely the maximum does increase with distance). Emergence Point Variance is usually measured in AU generally between 0.001 and 0.7 AU. This minimum error is minimal when compared with a jump of several lightyears, but for a short in system jump renders the jump very difficult and dangerous, but not entirely impossible.

The most famous example of a successful in-system F-Space jump is the one performed by Admiral Keyes at the Battle of Theta Persei II, during the Persei Campaign (a prolonged campaign mounted by the UEAF during the Colonial Wars, and one of the largest and longest campaigns of the Rimworlds Front, lasting 16 months from 2258-2259). Though the majority of his fleet successfully jumped in close to the ERC occupied planet, the troopship *Menelaus* jumped into the planet's upper atmosphere and was lost with all hands. Despite this tragedy, the Keyes Manoeuvre was instrumental in the UEF capturing Theta Persei II.

Velocity

Atmospheric velocity of aerospace craft is measured in Mach numbers, which is defined as a ratio of the speed of an object or flow relative to the speed of sound in the medium through which it is travelling. Interplanetary velocity is measured in terms of acceleration due to gravity, more commonly referred to as 'g'. This is approximately equal to the acceleration due to gravity on the Earth's surface at sea level, or 9.8m/s^2 .

Most ships equipped with reactionless displacement drives are capable of a constant 1g acceleration in deep space. Military craft can usually exceed this, pushing their acceleration up to 3g, sometimes higher, though extended operations at high acceleration can cause damage to both crew and vessel.

Smaller interplanetary and aerospace craft equipped with fusion drives are usually capable of high-g burns much higher than 3g, but are usually limited as to how long they can maintain such acceleration by either a lack of inertial compensators or finite fuel supplies. Or both.



Power Systems

Primary systems power for aerospace and interplanetary spacecraft of the late 23rd century is provided by lightweight supercompact fusion reactors that can generate a peak output in the high Gigawatt to low Terawatt range. The fusion process is fuelled by deuterium-helium 3 (D-3He), though in more recent military craft, this has been superseded by a new generation of reactors using powdered lithium hydride (LiH).

In the event of reactor shutdown, auxiliary power is provided by magneto-hydrodynamic turbines.

The large amount of power required for interstellar travel dictates that interstellar craft need a much larger power source to operate their star drives. As such, all interstellarcapable spacecraft have a dedicated, highenergy fusion reactor used solely by the FDrive. Ununpentium (Uup) is the main fuel source for the F-Drive.

Hull/Spaceframe Construction

Spaceframe composition consists of bonded alloy and composite beams. These materials provide enough strength for massive acceleration while remaining flexible enough to withstand atmospheric re-entry on aerospace craft.

All ships have hull-armour, composed of laminated insulators, micrometeorite shielding, composite material, and aerogel. Protection against projectile weapons is limited, but the aerogel is capable of dissipating radiation from lasers and particle beams.

Military vessels are also covered with radar absorbent material. The engines vents are provided with infrared suppression/dispersion, while the hull coating is laser absorbent to reduce lidar detection. Military vessels are usually coloured in a dark charcoal scheme to reduce visibility.

Life Support

Because of their size and relatively short operational range, aerospace craft have limited life-support systems. While an onboard fusion powerplant can provide heat and light for several weeks in optimum conditions, atmospheric scrubbers are typically only capable of recycling air for periods of up to 72 hours before needing replacement coolant pods. On military aerospace craft it is standard policy for all crew to wear sealed compression suits when in a combat zone, in case the craft is hit and depressurised.

On larger craft, the life-support systems have coolant reserves that can last years in optimum conditions, especially as during interstellar travel the crew are in their cryosleep capsules. Cryosleep capsules protect the crew during the stresses of travel through nine-dimensional F-Space. While in cryosleep, the ships' computers maintain the crew's body functions at enormously slowed rates, waking them upon the ships transition back into Real Space.

For commercial voyages, paying passengers are usually put into stasis before the ship even leaves dock. This maximizes closeness to medical facilities if something does go wrong. The ship then launches, and crew are put into stasis within a day after launch. On the opposite end of the journey, crew are usually woken up a day before the destination is reached, to allow them time to get over stasis sickness. Passengers are woken up shortly after the ship docks.

Military voyages will sometimes leave a skeleton crew awake throughout the voyage, cycling crew members back into stasis every 30 days or so. Troops being transported are put into stasis for the entire journey.

With mission-time typically in hours rather than days or weeks, artificial gravity systems do not come as standard on aerospace craft. On larger ships, artificial gravity is provided by field generators parallel to the main axis of the ship.

Computer Systems

To reduce crew workload and increase efficiency and safety, interplanetary and interstellar spacecraft are almost completely automated, equipped with carbon-60 based core mainframes running state of the art AI software developed by Artificial Life Incorporated. Crew members act as 'caretakers', and are only required to perform navigation duties such as docking and orbital insertion, or in-flight repairs.

Aerospace craft too have powerful onboard computer systems, incorporating electronic flight-control and fire-control systems.

Damage Control Systems

Most damage control is automated by a ships computer systems. If the reactor suffers severe damage, the entire assembly can be jettisoned before an explosion occurs. If the vehicle is damaged to the point it becomes untenable, emergency evac is prompted by the commander or automated systems. Aerospace emergency evac is typically via cockpit capsule ejection. Interstellar and interplanetary vessels usually carry emergency escape vehicles (lifeboats). If the crew is in cryosleep, their capsules will be loaded into emergency escape vehicles by the automatic systems.

Sensors / Communication Systems

A typical passive sensor array consists of: optical telescopes, infrared telescopes, and a planar-array radio telescope. Active sensing is provided by radar domes that employ centimetre wave radar for navigation and long range scans. Phased arrays along the hull provide target acquisition/tracking information for the ship's weapons. Communications is provided by a series FTL antenna. A variety of other relays and receivers exist for securing, and intercepting transmissions.



Stasis

Stasis is a form of medically-induced hibernation used to transport people on long space flights, and it sometimes is a punishment for crimes. People in stasis are cheaper to transport because they require less life support. They also age slower and are less likely to suffer from psychological conditions, such as cabin fever during space flight.

Nevertheless, stasis is not without its own risks. Passengers in stasis are putting their lives in the hands of the stasis pod and the stasis technician putting them under. Those coming out of stasis also regularly suffer from stasis sickness, a form of lethargy and short-term amnesia, as their minds and bodies adjust to once again having a regular metabolism.

Voyages in Stasis

As a rule of thumb, voyages lasting less than 30 days rarely put their passengers in stasis, as the medical risks outweigh the benefits. Exceptions may be prisoner transports or deployment of military ground forces. For voyages lasting more than 10 days, putting passengers in stasis is the norm. Again, there may be exceptions, such as military craft that need to be vigilant or long cruise voyages for the super rich.

Passengers are typically put into stasis before a ship leaves port. The ship leaves the port in a position to rush them to the port's medical facilities should complications arise putting them under. A ship's crew, on the other hand, is typically put under a day or two after leaving port. This gives the crew a chance to check the ship's systems and ensure the voyage is underway without issue before going under themselves.

Tradition dictates the ship's captain is usually the last under and first out of stasis, aside from the stasis technician herself. As the last crew member up, it is the stasis technician's job to put himself into stasis – a more difficult task than putting someone else under.

Once the entire crew is in stasis the voyage continues, controlled entirely by the software left to navigate the ship. This software is usually programmed to wake the crew – or at least key members of the crew – should anything out of the ordinary happen. Falling back from primary power to backup power will also usually trigger all crew members in stasis to wake up.

Upon nearing the voyage's destination, the crew is typically woken up a day or two before any passengers. This gives the crew a chance to recover from stasis sickness and take stock of the situation before the passengers awake. The first up is almost always the stasis technician, who oversees the recovery of the rest of the crew.

Passengers are woken up either a day before the ship arrives at the port or immediately after arrival. With the former, the passengers are given a chance to recover from stasis sickness before disembarking. With the latter, the passengers will be quickly shepherded off the ship and to an area of the port designed for recovery. The former is more common on luxury space flights and the latter on economy flights.

Putting People Under

When someone is put into stasis, he must first undergo decontamination. This is typically a special shower intended to reduce the number of microorganisms on her that would cause problems during stasis. He then dresses in a medical gown and reports to the stasis technician, who hooks up tubes for intravenous fluid, a catheter, breathing tubes and biomonitoring devices. This is all fitted inside a stasis pod, which looks something like an electronic coffin. The whole process takes about a half an hour per person being put under.

The stasis technician should make a Stasis skill roll. A success indicates the passenger has been put into stasis without a hitch. With a failure, the passenger has still been put into stasis successfully, but there has been a complication. The GM should flip a card and use the Stasis Complications table below to determine the complication. Finally, on a critical failure, something went terribly wrong! The result is left to GM discretion, but the result can be anything from permanent bodily injury to death.

A stasis technician putting himself under typically takes twice as long, and must succeed a Stasis skill roll with a -10% penalty.

Stasis Complications Table

Should something go wrong putting a passenger in stasis, complications may arise. The GM should use the table above to determine the complication.

2d6	Complication
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2-5	The stasis simply did not take. This becomes immediately obvious and the stasis technician may try again, only losing time.
6-8	Some chemical wasn't balanced correctly for the passenger's metabolism, which will cause heightened stasis sickness when he comes out. Double the duration and all penalties involved. Additionally, his memories from the 24 hours before he went into stasis may never be recovered.
9-10	The passenger was put too far under. When it comes time to wake him up from stasis, he won't respond to the usual methods. It will require minor surgery to bring him back up.
11-12	The metabolism of the passenger wasn't correctly slowed for stasis. He will wake up having aged only ½ as much rather than 1/10th as much. He will also wake up with severe consequence from starvation and dehydration. If the passenger fails a luck roll, he will take significant organ damage during stasis. This will result in an injury consequence that causes a -10% penalty to all physical skills until minor surgery is performed to repair the damage.

Waking People Up

A passenger can be woken up from stasis either manually by a stasis technician or by the stasis pod itself. Coming out of stasis is typically pretty straightforward. A stasis technician is typically on hand primarily to disconnect all the wires and tubes, detect complications early, and orient passengers suffering from stasis sickness. Disconnecting the equipment typically takes about 15 minutes per passenger.

Stasis Sickness

Despite its medical straightforwardness, coming out of stasis is rough on the passenger. He wakes up stiff, sore, thirsty, hungry, disoriented and likely nauseated. To top it all off, he is likely missing much of his memory from before he went into stasis. Usually this will all pass within 24 hours.

Recovering from stasis lasts 1d10 hours. During this time all actions are at a -10% penalty.

Additionally, the character will be disoriented and have holes in his memory until the recovery. It is common to not remember the last day or two before going into stasis, although not remembering entire months is not unheard of. Crew being put into stasis will often leave notes to themselves before going under. These notes will help them take stock of the situation before their memory comes back.

Aging in Stasis

Stasis slows a character's metabolism down to about 1/10th the usual rate. The stasis pod also supports all necessary bodily functions, including breathing, hydration and urination. It also slows down the aging process. For every period of time in stasis, the character ages only 1/10th the usual amount. This means, for example, that a character spending a decade in stasis will wake up only a year older physically.

Space Combat

This combat system is meant to be a fast, abstract system to simulate space and aerospace combat. There are two main kinds of space combat: aerospace combat and deep space combat.

Aerospace Combat

Aerospace combat covers all actions from high orbit, down to a planet's surface. This kind of combat typically involves atmospheric and orbital dogfighting between fast, manoeuvrable aerospace craft, or long range battery fire between capital ships in high orbit. It is usually very fast and very deadly.

Deep Space Combat

Deep space combat covers any actions that take place away from planetary orbit, out in interplanetary space. Away from planets, in the vastness of deep space, finding an enemy that wants to hide can prove very difficult. Whether the enemy is a single ship or a whole battle fleet, against the scale of space, both are equally small in size.

Sensors and intelligence are of utmost importance in this theatre of warfare. The side that finds the enemy first while they themselves remain hidden gain tactical superiority. Battles in deep space feel like a cat-and-mouse game, where both sides hunt for each other across the immense nothingness while at the same time attempting to stay hidden.

Passive sensors such as broad-spectrum electromagnetic sensors, mass detectors, neutrino detectors and thermal imagers sweep the vastness, looking for the tiniest anomaly that could be the signature of an enemy ship. Active sensors such as radar and lidar are normally only used if the ship has been discovered, or if there is nothing more to be gained from continued stealth.

Space may look empty, but it is seething with various kinds of radiation. Most ships emit heat and electromagnetic radiation, and the trick for hunters is distinguishing this signature from the background radiation of space.

The closest historic parallel to this kind of conflict is submarine warfare. When combat is finally joined, it can be swift and deadly. Ship based weaponry is not designed to kill people directly; it is made to tear apart inanimate objects.



The Combat System

Three prime elements affect the outcome of space combat:

1. Pilot skill: Skill and experience at piloting can mean the difference between life and death, especially during a dogfight.
2. Gunnery Skill;
3. Technology;

Each of these elements can be affected by modifiers dependent on the ships involved, atmospheric conditions, damage sustained etc.

Standard NPC Skill Levels Table

Rookie:	30%
Experienced:	50%
Elite:	70%

The Combat Round

The length time covered by a typical aerospace/space combat round varies dependant upon the range between the combatants. At the ranges commonly seen during space combat, travel times for missiles to target can take hours and it may take several seconds for even beam weapons to reach their targets.

Combatant Range	Distance	Round Length
Gun range	Medium (10km)	10 seconds
Missile Range	Very Long (1000km)	1 minute
Orbital Range	Distant (10,000km)	20 minutes
Planetary	100,000km+	1 hour

Once you have calculated the length of the combat round, combat proceeds as follows:

1. Detection
2. Initiative
3. Declaration of intent
4. Movement
5. Combat resolved
6. Hit locations
7. Damage calculated
8. Book keeping

1. Detection

The most important part of modern warfare is detecting the enemy before the enemy finds you. Most 23rd century space going military vessels are optimised for minimal electromagnetic emissions. Two types of sensors are available: Passive and Active.

Passive Sensors:

Passive sensors emit no energy and depend upon EM energy emitted by a target vessel. Passive sensors are the preferred method of detection since they do not give your position away.

Active Sensors:

Active sensors as the name suggests emit electro-magnetic energy on a variety of wavelengths and rely on the reflected image to detect targets. Generally the detection range for Active sensors is less than that of Passive sensors. The disadvantage of Active sensors is they emit large amounts of energy and easily give the emitting vessels position away.

However, Active sensors often provide much more target information and give a bonus to the firing solution. Many modern vessels rely on remote semi-autonomous vessels as an aid to detection. These drones act as pickets, relaying target information back to the mothership, keeping the mothership out of harms way.

The Detection roll must be made each round, and uses the Electronics Communications skill, modified as follows:

DETECTION MODIFIERS:

All effects are cumulative, but no matter how many negative modifiers apply, never reduce the detection chance below 05%.

Modifier	Effect
-50%	x4 Sensor Range
-30%	x3 Sensor Range
-15%	x2 Sensor Range
+/-0	x1 Sensor Range

+20%	x1/2 Sensor Range
-5%	Per level of Stealth a vessel has Auto Target 'Active'
+50%	In targets drive exhaust cone*
-50%	Out of the sun
-10 to -50%	Background 'cover'
-50%	Enemy vessel engaged in Silent Running mode
+10%	Target manoeuvring

*This modifier does not apply to ships using a reactionless displacement drive.

Each ship is allowed to make a Detection check each combat round, unless the Game Master decides circumstances make this impossible.

A successful Detection roll reveals the location of the enemy vessel, and provides a provisional target lock. This lock remains automatically unless circumstances change dramatically for the worse. Increasing target range, getting behind cover etc.

Vessels may convey detection information to others assuming they are within communications range.

A vessel that has not detected another is automatically Disadvantaged and may not take any 'unreasonable' actions.

2. Initiative

Both sides roll 1d20 and apply modifiers. Each ship has its own initiative modifier, which is dependent on onboard computer systems etc. A pilot also gains +1 for every 5% that he has in Pilot over 50%.

3. Declaration of intent

The ship with the highest initiative score gets to act first.

4. Movement

The movement phase consists two phases:

Phase 1: Altering Engagement Range

Vessels may attempt to alter the engagement range. Both pilots must make a Pilot roll, modified by their vessel's Speed rating. The difference in Speed ratings between ships becomes a positive modifier for the faster ship, at a rate of +5% per point of difference.

If a ship chooses to attempt to open the range it should, logically, have to be pointing away from the enemy, and be unable to use any bow mounted weapons. The aforementioned "drive exhaust cone" comes into play, giving the enemy another shot at sensor lock if he didn't have one already.

Consult the table below:

Result	Effect
Fumble	Enemy gains +/-1 on engagement range in their favour
Failure	No effect
Normal	+1 to engagement range
Special	+2 to engagement range
Critical	+3 to engagement range

RANGE BAND DESCRIPTIONS:

Range Band	Description
Close	Broadside range – anything up to 1km
Short	Close dogfighting range for aerospace fighters – up to 5km
Medium	Typical dogfighting range for aerospace fighters – 10km
Long	50km
Very Long	5000km
Distant	5000km
Very Distant	50,000km
Planetary	500,000km+

Phase 2: Manoeuvring for Advantage:

Both vessels pilots must make a second Pilot roll, to try and gain a tactical advantage/firing solution. Compare the results of both pilot's rolls on the following table:

	Fail	Success	Special
Fail	N	D/A	D/A
Success	A	N	D/A
Special	A/D	A/D	N

Key:

N: no effect;

A: Advantaged;

A/D: Advantaged/Disadvantaged;

D/A: Disadvantaged/ Advantaged;

A vessel with Advantage gains +20% on maintaining advantage in the following combat round.

PHASE 2 PILOTING MODIFIERS:

+05% Per level of manoeuvre a ship has.

+05% Per level of battle computer a ship has.

5. Combat Resolution

The ship which has the highest initiative score gets to fire first. The attack roll is a PC's Gunnery skill with appropriate modifiers. A pilot can choose to forgo an attack roll, throwing everything into evasion, which will give the attacker a penalty to their Gunnery check.

ATTACK MODIFIERS

All effects are cumulative, but no matter how many negative modifiers apply, never reduce the attack chance below 05%.

Positive Percentile Effect

+20%	Guns at close range
+10%	Guns at Short range
+20%	Advantaged
+10%	Active Sensors Target lock
+25%	Target immobilised and helpless
+20%	Target surprised during non-combat.
+10%	Target surprised during combat.
+10%	Attacking from target's blind spot.
+05%	Each level of Fire Control attackers onboard computer systems has.

Negative Percentile Effect

-75%	Target cannot be seen, or sensed in any way.
-10%	Disadvantaged
-10%	Using relayed sensor information
-20%	Attacking craft disabled in some way (Game Masters discretion).
-10%	For every range level beyond Medium
-??%	If defending craft declares that it is evading, the number by which the pilot made his/her Piloting skill check by is deducted from both the attackers and defenders Gunnery skill for that MR.
-05%	Each level of ECM a defender's ship has. This can be countered by ECCM.

Countermeasures:

As well as Electronic Countermeasures ('ECM'), missiles are susceptible to a number of countermeasures that can fool their guidance systems. Most vessels have a limited number of deployable countermeasures, ranging from simple chaff/flares to deployable ballutes. Countermeasures have a rating that determines their effectiveness, effectively the % chance of fooling a missile and causing it to miss.

Pilots may add 1/10th pilot skill to the countermeasures effectiveness. Dogfight missiles may also be used to target incoming missiles using normal targeting rules.

Countermeasure	Modifier
Chaff/flare	-25%
General Hyde Dynamics c-235x Ballute	-50%
GE Ltd GAU-15 point defence gatling	-40%

6. Hit locations

If any weapons hit, then determine where the weapon strikes its target on the appropriate table below:

Aerospace Craft Hit Locations Table

1d20	Location
01	Cockpit
02-03	Sensors
04-06	Lifting/Manoeuvre surfaces
07-08	Weapon
09-12	Fuselage
13	Ammunition
14	Computer
15	Electronics
16-17	Fuel
18-19	Power Plant
20	Engines

Interstellar Craft Hit Locations Table

1d20	Location
01	Sensor Array
02	Electronics
03	Bridge/Command Deck
04	Computer
05	Airlock
06	Weapons
07	Cryosleep chamber
08	Power Plant
09-12	Hull
13-16	Star Drive
17-18	Engines
19	Medical
20	Magazine



7. Damage Calculated

Weapon damage rolls are made. If the damage penetrates the Armor Value of a ship, that location is breached, and internal damage sustained must be determined on the relevant table. Modifiers to damage are as follows:

Gunnery roll result	Modifier
Normal success	Normal damage dice
Special success	X2 damage
Critical success	X3 damage

Damage is based on multiples of the Armor Value (round down).

■ Damage exceeds AV of vessel:

Light Damage: Consult damage tables below to find out what happens when hit sustained to relevant location.
1d6 damage to personnel.

■ Damage exceeds x2 AV of vessel:

Serious Damage: Consult damage tables below to find out what happens when hit sustained to relevant location. 2d6 damage to personnel.

■ Damage exceeds x3 AV of vessel:

Critical Damage: Consult damage tables below to find out what happens when hit sustained to relevant location. 3d6 damage to personnel.

■ Damage exceeds x4 AV of vessel:

Fatal Damage: Vessel destroyed.

Results of damage exceeding AV:

When damage exceeds the armour in a hit location, consult the information below to see what happens with each successive hit. If a location has already suffered damage during combat, it progresses to the next level of severity.

The time to repair damage sustained, as well as the time and skill(s) needed is given with each entry. For the most part the skill necessary is obvious e.g. Engineering is for ships' drives. The various mechanical skills are for other types of engines. For damage such as hull breaches, Devise is used, since this involves mechanical devices.

Repair times are in man hours. The repair team leader makes the roll, his assistants reduce the time. Assume Light Damage is usually a 2 man job. Serious Damage usually features bigger holes which allow up to 8 men to work on them. If a repair time is not given, assume the job requires the full attention of a shipyard.

Light Damage is generally repairable in a few hours, Serious in about a day, and Critical is usually beyond repair.

A Critical repair result gets the job done in 1/5 the time, a Special in 1/2. A Fumble increases the damage to the next level.

Airlock:

Light Damage	Airlock unusable. Repair: Devise; 1 hour.
Serious	Damage: Airlock destroyed. Repair: Devise; 2d12 hours.
Critical Damage	Airlock destroyed. Section directly adjacent to the airlock suffers rapid depressurisation. Repair: Devise, 2d12 hours to seal breach, but airlock is GONE.

Ammunition:

Light Damage	Magazine damaged, becomes useless. Repair: Armoury; 1 hour.
Serious	If HE or HEAP ammunition is carried, it explodes, destroying the craft. A Special Luck roll will allow PCs to make an emergency ejection from the craft, taking 2d6 damage to total HP. A normal success will mean that they have been thrown clear, taking 4d6 concussion and burn damage to total HP. Failure means the PC died in the explosion. Repair: Good luck fixing that!

Bridge/Command Deck:

Light Damage	All crew on bridge take 2d6 damage.
Serious	Bridge is depressurised and flight controls damaged. See rules for depressurisation later. Repair: Devise; 1 hour.
Critical Damage	Bridge systems destroyed. Anyone present are killed. Repair: Go directly to space dock, do not pass go.

Cockpit:

Light Damage	Cockpit damaged, vision obscured. -10% penalty to subsequent Pilot checks. Repair: Devise; 1 hour to replace canopy.
Serious	Cockpit is depressurised. Devise; 1 hour to replace canopy.
Critical Damage	Cockpit's electronics systems are fried. All control of the craft is lost. Repair: Electronics (systems), 2d12 hours.

Computer:

Light Damage	Onboard computer-reliant systems are compromised. Piloting and Fire Control bonuses are lost. Repair: Computer (operation), 2d6 minutes to bypass, Electronics (systems), 1d6 hours to repair).
Serious	Damage to computer systems now confers a penalty of -25%. Repair: Electronics (systems), 2d6 hours).
Critical Damage	Computer systems crash – backups kick-in with 10 minute up-time. Basic manual controls only, with -50% penalty. Repair: Electronics (systems), 2d6 hours AND Computer (operation) 2d6 hours.

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Cryosleep Chamber:

Light Damage	Damage: 1d6 random cryosleep capsules are damaged, killing anyone within. Repair: Electronics (systems), 1d6 hours per tube. Not that that's any consolation to the occupants.
Serious	A further 1d10 cryosleep capsules are damaged. Repair: ditto.
Critical Damage	Cryosleep chamber destroyed, along with anyone in it.

Electronics:

Light Damage	Strike disables random electronic system (Game Masters' choice): Avionics; Computer; Communications; Fire Control; Sensors etc. Repair: Electronics (systems), 2d6 minutes.
Serious	All electrical systems shut down, except for emergency backups (e.g. life support). Repair: Electronics (Systems) check to bring systems back online in 1d6 minutes.
Critical Damage	All electrical systems completely fried, including emergency backups. No chance of repair.

Engines:

Light Damage	Speed cut in half. All bonuses conferred to Piloting check lost. Repair: Engineering, 1d6 hours.
Serious	Engines disabled. Repair: Engineering, 2d6 hours.
Critical Damage	Engines destroyed. If in space, ship drifts – if in orbit, it begins to fall into a dive. Only a Special Pilot roll will allow ship to be crash-landed with a chance of survival of the crew/passengers. Game Master should determine damage inflicted on crew by impact.

Fuel:

Light Damage	Half fuel capacity lost.
Serious	Remaining fuel lost.
Critical Damage	Explosion in fuel compartment, disabling craft.

Fuselage:

Light Damage	Piece of random interior equipment or passenger lost. Repair: Hole takes 2d20 minutes to patch. Devise.
Serious	Half of any interior equipment (and passengers) not strapped down blown out of large breach. Repair: 1 hour to fix including exterior work. –10% to Pilot rolls. Devise.
Critical Damage	Large portion of hull removed. Any in location take 3d6 damage. Section directly adjacent to the airlock suffers rapid depressurisation (see rules later). –15% to Pilot rolls.

Hangar Bay:

Light Damage	Hangar Bay suffers rapid depressurisation. Repair: Devise, 2d20 minutes to patch hole.
Serious	Random craft in hangar bay is disabled. Or suffers a Critical Damage result on the appropriate table. Hangar bay is presumably depressurised as well. Repair: Devise, 2d12 hours to fix big hole.
Critical Damage	Hangar Bay destroyed, along with everything in it.

Hull:

Light Damage	Piece of random interior equipment (or passenger) lost. If craft is pressurised, section of ship hit loses pressure. Repair: Hole takes 2d20 minutes to patch. Devise.
Serious	Half of all interior equipment (and passengers) not strapped down blown out of large breach. If craft is pressurised, section of ship hit loses pressure. Repair: 1 hour to fix including exterior work. Devise, 2d12 hours.
Critical Damage	Large portion of hull removed. Any in location take 3d6 damage. If craft is pressurised, section of ship hit loses pressure.

Magazine:

Light Damage	Magazine damaged, becomes useless. Same as Ammunition results.
Serious	If HE or HEAP ammunition is carried, it explodes, destroying the craft. Explosions rip through the hull, PCs have 2d6 MR to escape.

Medical:

Light Damage	Anyone in medical takes 2d6 damage.
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Power Plant:

Light Damage	Power reduced by half. Speed cut in half. Life support cut in half. Repair: Engineering, 1d6 hours fixes power and speed, but that Oxygen isn't coming back.
Serious	Power cut – emergency backups kick in with finite amount of up-time. Repair: Engineering, 2d6 hours.
Critical Damage	All power lost except for 10 minutes emergency backup. Repair: Dry-dock needed to repair reactor.

Sensor Array:

Light Damage	Random sensor array disabled (Game Masters choice from those on craft sheet). Repair: Electronics (systems) 1d6 hours.
Serious	All active sensors disabled. Repair: Electronics (systems) 1d6 hours for each system.
Critical Damage	Sensors totally disabled.

Star Drive:

Light Damage	Star drive disabled. Repair: Engineering, 1d6 hours.
Serious	Star drive disabled. Repair: Engineering, 2d12 hours
Critical Damage	Star drive explodes in 2d6 MR, destroying large section of ship and causing a potential lethal burst of radiation which kills all crew (CON vs. POT 18 or dead). Repair: "Quick, eject the warp core!" (Engineering/Computer Operation).

Weapon:

Light Damage	Weapon accuracy reduced: –10% to Gunnery rolls. Repair: Armoury, 1d6 hours.
Serious	Weapon jammed into fixed firing position. –25% to Gunnery rolls. Repair: Armoury, 2d6 hours.
Critical Damage	Weapon destroyed. 2d6 damage to gunner.

8. Book Keeping:

After damage has been worked out, the round ends.

Appendix

1. Rapid Depressurisation

When a hull breach occurs on board a pressurised craft, emergency doors usually cycle shut, closing off the section from the rest of the vessel. Standard life support systems can handle a maximum of 6 repressurisations.

If a PC is caught in a section that suffers explosive decompression, they will most likely be sucked out into space along with the air, anyone else in the section, and anything not strapped down.

Space is an extremely dangerous place for humans. The primary danger in space stems from the fact that space lacks sufficient oxygen and pressure for humans. A human exposed to vacuum without a suit will die extremely quickly (there is no need to roll dice). A leak in a pressurized vehicle, structure, or suit will result in a loss of air and pressure. Such situations should be carefully handled by the Game Master based on the conditions of the situation and plot requirements. If the life support systems of a structure, vehicle, or suit fail, those inside will suffocate when the air runs out.

2. Atmospheric Combat

Combat in atmosphere may be extremely dangerous at high speeds. Any vessel travelling at hypersonic speeds (e.g. re-entry) that takes Serious damage (or greater) is automatically destroyed as they lose aerodynamic integrity and are torn apart.

3. Example: an Aerospace Combat Round

Marine pilot Cleaver is pursuing an ERC fighter in the upper atmosphere of the planet Tartarus. As we join the pursuit, the enemy ship is 30km away – long range. As the combat begins, there is no need for the Detection Phase of combat, and so both pilots move to Combat Round Phase 2, and roll for Initiative.

Cleaver has a Pilot skill of 50%, so gains no bonus to his Initiative roll from this, but his ship, an AS-116 Vulture Space Superiority Fighter, confers a bonus of +6. He rolls his d20, getting a 15. With his bonus, this gives him an Initiative score of +21.

His opponent, flying an ERC-60 Black Widow, has a Pilot skill of 55%. This gives the ERC pilot +1 because of his Pilot skill, and +5 from his ship, conferring a +6 bonus, identical to Cleaver. It's all down to the dice roll: 13. Bad luck. 13+6 gives the ERC pilot an Initiative score of 19. Good, but not as good as Cleaver's.

Time for Phase 3: Declaration of Intent. Cleaver has won the Initiative, and declares his intent to close range and attack. The ERC pilot declares he intends to flee. The Combat Round moves to Phase 4: Movement.

- Movement Phase 1 (Altering Engagement Range) begins. Both pilots open up the throttle, kicking in full afterburn. The difference between their speed is in Cleaver's favour (Vulture afterburn 51 – Black Widow afterburn of 48 = 3), giving him a $3 \times 5 = +15\%$ to his Pilot roll. Cleaver has a modified Pilot skill of 65. He rolls a 13 – a Special result! This allows him to close the engagement range by 2 bands. His opponent gains no modifier to his Pilot skill, and rolls a 44 – a Normal result, allowing him to increase the range by 1 band. Cleaver succeeds, closing to medium range.
- Movement Phase 2 (Manoeuvring for Advantage) now begins, as Cleaver attempts to manoeuvre his fighter to acquire a firing solution. At the same time, the ERC pilot executes a series of twists and turns, attempting to shake off his pursuer. Cleaver's fighter has a Manoeuvre rating of 5 and a Battle Computer rating of 1, giving him +30% to his Phase 2 Pilot roll. His opponent's ship has a Manoeuvre rating of 4 and a Battle Computer rating of 1, giving a +25%. Cleaver's modified Pilot skill is 80%. He rolls a 32 – a Normal success. The ERC pilot's modified Pilot skill is 75%. He rolls a 56 – also a Normal success. Consulting the relevant table, it can be seen that neither pilot gains a significant Advantage.

Combat Round Phase 5 begins – Combat Resolution. Cleaver arms one of his AIM-90E Headlock Smart Missiles, while the ERC pilot decides to forgo his attack, and instead throws his craft into a series of desperate manoeuvres to avoid being hit.

Cleaver has a Gunnery skill of 60%. The AIM90Es onboard targeting systems gives him a bonus of +25%, and his fighters onboard Fire Control system gives him a further +5%, giving him a modified Gunnery skill of 90%! However, before he makes his roll, he must apply a series of negative modifiers from his opponent. The Black Widow has an ECM rating of 2 ($2 \times 5 = -10\%$), and because the ERC pilot chose to Evade rather than attack, he makes a check against his piloting: 44. Subtracting this from his piloting skill of 55 gives 11. Adding these together, gives a -21% to Cleaver's Gunnery skill.

Cleaver's adjusted Gunnery skill is 69 ($90-21$). He rolls a 22. It's a hit! Rolling an 18 on the Aerospace Hit Location Table, we see that the AIM90E smart missile has hit the Black Widow's power plant. A Black Widow fighter has an Armor Value (AV) of 12, and an AIM90E does 5d6 damage. Cleaver rolls 2,5,1,4,2, totaling 14 – his missile penetrates, doing Light Damage (the damage exceeds AV but not by x2 or higher). The ERC pilot takes 1d6 damage. Light Damage to a ship's power plant cuts the speed in half and reduces life support too.

Ordnance

MISSILES

Missiles have a definitive advantage over beam and kinetic weapons, in that they can track and home in on an enemy vessel no matter how the other ship manoeuvres. Most beam weapons lose effectiveness and accuracy with range; a missile's warhead can get in close to a ship and have a far greater potential for hitting and doing damage.

Missiles also need not be launched directly from the main ship. They can be "dropped off" into space while the main vessel manoeuvres away, so that when their engines are ignited they will not give away the position of the ship.

AGM-204A Threat Suppression Attack Missile (TSAM)

The TSAM (Threat Suppression Attack Missile) is a low-cost self-protection weapon designed to defend strikeships and dropships against airborne missiles, early warning radars, SAM sites and AAA. Small, short ranged and lightweight, the TSAM design trades off the loiter mode of most modern Threat Suppression Missiles for speed, in order to eliminate a threat rapidly.

The Tekell solid motor is a high impulse unit that will accelerate the missile to hyper velocity in less than two seconds; after burnout, the missile coasts to the target. The TSAM is guided but cannot be fired at. It is designed to attack incoming missiles. It locks on automatically.

ROF	1/MR
Damage	6d6 to all in a 5m radius of explosion
Effective Range	Range varies considerably with launch speed and altitude, though practical limits in an Earth-density atmosphere are 20 km at sea-level up to 60 km at high altitude.
Weight	26.5kg
Attacks	01
Chance of Success	Gunnery skill +15%
Fail	99

AGM-220C Hellhound Smart Missile

The Hellhound is a multi-role tactical missile designed for use against point targets such as vehicles, armour, buildings and bunkers. The weapon can be launched in two different modes: in the first, the dropship Weapons Officer locks the missile's seeker onto a target before launch and provided he maintains the lock until the moment of launch the weapon will then be guided to that target; in the second, the weapon is directed to a grid reference where it then commences a search for a pre-designated target, or one selected from an internal menu of potential targets, or for a target of opportunity.

The dual-seeker system combines a high resolution millimetre-wave radar and infrared imager linked to a sophisticated 12 Mb processor which determines the missile's optimal attack profile and warhead fusing to ensure a kill. This is a guided weapon.

ROF	1/MR
Damage	8d6 to all in a 5m radius of explosion
Effective Range	1.5km
Weight	22.4kg
Attacks	01
Chance of Success	Gunnery skill +15%
Fail	97

Mk. 10 70mm Zeus

The Mk. 10 Zeus is a 70mm unguided rocket system that has been the mainstay of ICM service for some 40 years, in its various forms. A small, spin-stabilized rocket, the Zeus is now supplied with only two types of warhead: a smart fused antipersonnel fragmenting warhead and a smoke warhead for laying particulate smoke screens.

ROF	1/MR
Damage	10d6 / 5m radius
Effective Range	30km
Weight	32.5kg
Attacks	01
Chance of Success	Gunnery skill
Fail	99

Mk. 16 150mm BANSHEE 70

The Banshee 70 system constitutes one of the most important unguided weapons in military service. In the ICM, it is most commonly associated with the LAU-190/A 16 tube launcher mounted on the AS-114 Valkyrie dropship. Each rocket is spin stabilized by a fluted exhaust nozzle and has three springmounted wrap-around fins at the rear. The Mk. 16 model has a high-impulse rocket motor, giving a burnout velocity in excess of 1800m per second, providing excellent stand-off range and accuracy in the air-to-surface role.

M18

The M18 is an incendiary warhead intended for target marking and for use against buildings and light fortifications.

M451

The M451 is a 36kg High Explosive, blastfragmentation warhead with a 'smart' fuse for use against a wide variety of targets. The TIAS target analysis system aboard the dropship will set the fuse at the moment of launch according to the target, allowing for airbursts against soft targets or impact fusing against armour.

M597

The M97 is a multi-dart warhead containing 17 incendiary flechettes designed to penetrate tank armour, field defences and bunkers, and then causes fires within them.

M598

The M598 is a 'beehive' round for use against battlefield targets such as exposed personnel, soft vehicles, aerospace craft and VTOL weapons platforms. The warhead carries a load of approximately 2400, 7.2g kineticpenetrating darts capable of saturating a 20m radius area. With both M597 and M597 warheads, the dropship TIAS will set the optimum distribution pattern of the darts the moment of launch, depending on the primary target.

ROF	1/MR
Damage	M18: 6d6 / 5m radius; M451: 4d6 / 10m radius; M597: 8d6 / 3m radius; M598: 6d6 / 20m radius;
Effective Range	8km
Weight	40kg
Attacks	01
Chance of Success	Gunnery skill
Fail	97

AIM-90E Headlock Smart Missile

The AIM-90E is a short-ranged air-to-air smart missile optimized for dogfight engagements. Guided by a dual optical / active radar seeker, the Headlock missile accelerates to hyper velocity speeds after launch and then glides the remaining distance to the target. The warhead consists of thirty four explosive darts that are released by the missile as it approaches the target.

To ensure a kill, the AIM-90's unique fusing system directs these flechettes into an optimum attack pattern upon release, dependent upon the target's current aspect. The 'E' variant of the missile incorporates changes to the countermeasures software and enlarged aerodynamic surfaces to improve lift at high altitudes.

ROF	1/MR
Damage	5d6 / 5m radius
Effective Range	15km
Weight	32.2kg
Attacks	02
Chance of Success	Gunnery skill +25%
Fail	98

Mk. 88 120mm SGW

The Mk. 88 is a 120mm, short ranged (under 1500m) weapon designed as a low-cost alternative to the Hellhound versus light armour and prepared positions such as hangars or gun emplacements. A simple weapon, it comprises a rocket with a lowimpulse motor steered by fold-out fins. Guidance is by an imaging infra-red seeker in the nose, and a 2.2 kg shaped-charge warhead is positioned just behind. The SGW is a fire-and-forget weapon once locked-up by the dropship, the missile self-guides to the target.

ROF	1/MR
Damage	6d6 to all in a 5m radius of explosion
Effective Range	1.5km
Weight	16.14kg

Attacks	01
Chance of Success	Gunnery skill
Fail	97

ASAT-100 Predator

The ASAT-100 Predator missile is the UEAF's primary medium range anti-satellite missile system. The total weapon system is usually mounted dorsally or ventrally on military craft of corvette size or greater, and has the capability to launch as many as six missiles simultaneously against an equal number of targets under battlefield and/or heavy jamming conditions.

Upon release from the launch bay, the first stage motor ignites and accelerates the missile away from the launching ship. After four seconds the first stage burns out and the missile coasts the rest of the way toward the target. The second stage ignites when the missile enters its terminal phase to provide the necessary burn to complete the intercept against the target. A coolant jet system in the tail helps mask the motor's infrared and UV signature when it burns. Guided. Its warhead is a forged fragment ring that creates a lethal burst of fragments.

ROF	1/MR
Damage	3D6 x3 / 5m radius
Effective Range	50km
Weight	183.2kg
Attacks	02
Chance of Success	Gunnery skill +25%
Fail	98

Death Angel STG Ballistic Missile

The STGBM carries your standard Space-to-Ground tactical nuclear warhead. Everything within 500m of the point of impact is destroyed and everything past it for another 500m suffers 20d6 damage. Every 100m past that cuts that damage by half. STG can be fired at any target but they are slug for manoeuvrability. They are guided but cannot be aimed.

ROF	1/MR
Damage	Special
Effective Range	5000km
Weight	248.2kg
Attacks	01
Chance of Success	Gunnery skill +15%
Fail	96

ASAT-120 Balmung Anti-Satellite Missile System

The ASAT-120 is a hypersonic, space launched, guided anti-satellite interception missile employing active radar target tracking, proportional navigation guidance, and active target detection. It employs active, semi-active, and inertial navigational methods of guidance to provide an autonomous launch and leave capability against single and multiple targets.

The ASAT-120 weighs 150kg and uses an advanced solid-fuel rocket motor to achieve a speed of Mach 8.2 and a range of 1000km. In long-range engagements ASAT-120 heads for the target using inertial guidance and receives updated target information via data link from the launch vessel. It transitions to a selfguiding terminal mode when the target is within range of its own monopulse radar set (100km). With its sophisticated avionics, high closing speed, and excellent end-game manoeuvrability, chances of escape from ASAT-120 are minimal. Upon intercept an active-radar proximity fuse detonates the highexplosive shaped penetrator warhead to destroy the target. At closer ranges ASAT-120 guides itself all the way using its own radar, freeing the launch vessel to engage other targets.

ROF	1/MR
Damage	3D6 x6 / 5m radius
Effective Range	1000km
Weight	150kg
Attacks	02
Chance of Success	Gunnery skill +15%
Fail	98

ASAT-160 Gungnir Long Range Anti-Satellite Missile System

The ASAT-160 Gungnir missile system provides the UEAF with a weapons system with capability to interdict ships at ranges well beyond those of other space going craft. The ASAT-160 missile was designed to cripple warships and orbital structures in a highorbit/deep space environment. Once targeting information is obtained and sent to the missile, it is fired. Once fired, the missile flies to the target location, turns on its seeker, locates the target and strikes it without further action from the firing platform. This allows the firing platform to engage other threats instead of concentrating on one at a time. The usual payload for the ASAT-160 is a shaped penetrator high-explosive warhead.

An appropriately configured ASAT-160 can be launched from the aerospace weapons rack of Tyr class orbital bombardment craft.

ROF	1/MR
Damage	4D6 x6 / 5m radius
Effective Range	2500km
Weight	178.5kg
Attacks	02
Chance of Success	Gunnery skill +15%
Fail	98

ASM-88 Fenris Anti-Ship Missile System

The Fenris Anti-Ship Missile system provides the UEAF fleet vessels with deep-strike capability against enemy vessels in an interplanetary space combat environment.

After launch, a solid propellant propels the missile until a small ion engine takes over for the cruise portion of flight. Infrared detection is difficult because the ion engine emits little heat, and the enhanced stealth profile of the missile. Systems include Solar Positioning System (SPS) receiver; Digital Scene Matching Area Correlation (DSMAC) system; Time of Arrival (TOA) control.

The ASM-88 can be reprogrammed while inflight to strike any of 15 pre-programmed alternate targets or redirect the missile to any Solar Positioning System (SPS) target coordinates. It is also able to loiter in strike range of a target area for some hours, and with its on-board sensors, allows the commanders on the launch vessel to assess battle damage of the target, and, if necessary redirect the missile to any other target.

Conventional payload is a WDU-36 warhead containing a forged fragment ring that creates a lethal burst of fragments. Nuclear payload up to 200kt is also an option..

ROF	1/MR
Damage	Conventional: 6d6 x6 / 15m radius; Nuclear: 6d6 x15 1km radius, x5 5km radius;
Effective Range	5000km
Weight	200kg
Attacks	03
Chance of Success	Gunnery skill +25%
Fail	99

KINETIC WEAPONS

Apart from their obvious use by aerospace craft, in space, kinetic-energy based weapons are usually reserved for point defence on capital ships and space stations, to destroy incoming missiles or space debris.

25mm Chain Cannon

With a cyclic rate of 300 shells a minute, this servo-slaved anti-aerospace chain cannon is an extremely powerful addition to any craft, and allows for greater aerospace dominance and flexibility in missions. The weapon system has a cooling system running from the engines to cool the gun during use.

ROF	Burst of 100/MR; (ROF Bonus +10%)
Damage	3d8 per round
Effective Range	3.5km
Ammo	2000 (20 bursts)
Fail	99

10mm VRF Gauss Cannon

A cryogenically cooled, rapid fire cannon, the VRF Gauss Cannon fires a 10mm HEAP bullet at velocities of 4500metres per second with an effective cyclic ROF of 4000rpm. The weapon fires 100 round bursts. The cannon is usually mounted in a turret which gives an 180° firing arc.

ROF	Burst of 100/MR; (ROF Bonus +10%)
Damage	4d6+6 per round
Effective Range	5.5km
Ammo	4000 (40 bursts)
Fail	99

30mm Rail Cannon

Railgun launchers fire kinetic ammunition at velocities over 12 km per second. Despite their high rate of fire, these weapons are less accurate than beam weapon's against manoeuvring starships or missiles, and have a practical engagement range less than 100km.

However, since a single hit from a railgun round is capable of causing catastrophic damage to a space target, they remain the most powerful close defence weapons in a starships inventory. The railguns work by accelerating a charged plasma to high velocities and using it to propel a kinetic round at the target. They fire up to 30 rpm each and are fed from an autoloader.

ROF	1x burst of 6/MR
Damage	2d6 x10
Effective Range	100km
Ammo	magazine of 120 slugs (20 bursts)
Fail	96

Orbital Minefield

An Orbital Minefield is dispensed out the rear and can be released in any number. When deployed, the organize themselves in a lattice fashion and actually construct their own defence network by connecting themselves with the other units. These lightweight nets, which can stretch tens of kilometres across, are held rigid by alloy framed and stabilized by tiny thrusters. If the mine is struck on its own, the damage is dealt normally. If the ship strikes the net, the front mines explode, but the outer ones can bend themselves in and strike the rear or midsection of the ship.

Damage	2d6 x10
Effective Range	500m
Fail	96

HIGH ENERGY WEAPONS

20 Megawatt Phased Plasma Cannon: The power source for the Boyars is a 6mW hydrogen fuel cell. The fuel cell drives a homopolar fast-discharge generator which stores power until it has sufficient energy to pulse the plasma gun's laser. When the laser is fired, it creates an ionized trail in the atmosphere which is charged by the gun's electromagnetic coil to form a solenoid mass – is fed mechanically into the tunnel, where it is vaporized by the laser beam into a superheated plasma. Which is accelerated by the magnetic coil to velocities in the region of 5000m/s. The Plasma travels the tunnel until it impacts the target at a focused point, using its considerable kinetic and thermal energy for maximum effect penetration. Because of the power usage, both guns in a turret fire in sequence rather than simultaneously.

ROF	3x bursts /MR; (ROF Bonus +2%)
Damage	2d6x6
Effective Range	300km
Ammo	Runs from ships powerplant
Fail	98

80 Megawatt Infrared Laser

Point defence for large military spacecraft, the 80mW free-electron laser is capable of vaporizing small targets such as railgun rounds, or disabling incoming missiles and fighter at ranges up to 30km.

ROF	3x shots /MR (ROF Bonus +2%)
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Damage	2d6x5
Effective Range	300km
Ammo	Runs from ships powerplant
Fail	98

40 Megawatt Free Electron Laser

These are effective against both ground and air targets. Beam power is supplied by a 10 mW hydrogen fuel cell driving a homopolar fast discharged generator. The beam is propagated, without the need for lasants, by the interaction of a particle-accelerated electron beam with a static electric field. The advantage of a free-electron laser is its ability to be tuned to wavelengths that would minimize beam degradation by the local atmosphere. In addition, a reactive tune facility, cued by laser returns from the beam, is incorporated to allow rapid returning in the event that countermeasures are deployed to block the beam. The lasers can be used in two modes. In 'dazzle' mode, the beam is used to burnout enemy optical/infrared sensors or blind infantrymen and pilots (success means target blinded for 2d6 minutes, invoking –25% penalty), has a low output. It is in this mode that the beam is at its most efficient, playing continuously across a target without the need for pulsing or the associated effects on beam propagation from thermal blooming, ionization or dielectric breakdown. In 'pulse' mode, a beam is pulsed at full power at the target.

Damage is caused by the mechanical impulse of the beam as it superheats the target area, capable of penetrating infantry persona armour or the skin of a missile or aerospace craft.

ROF	1x shot /MR
Damage	2d6x4
Effective Range	500km
Ammo	Runs from ships powerplant
Fail	98

800 Megavolt Turboalternator Powered Neutral Particle Beam

The 800 MeV Weapons are the primary beam weapons of the ICM Frigates. They fire into the starships forward 'cone', each capable of disabling a target's electronics and instrumentation at ranges up to 250 km.

Sufficient deuterium tanking exists for up to 230 seconds of firing. One hit to another ship will cause 8d6 damage but the ship won't be damaged. Instead, if "destroyed", all electrical systems shut down, rendering the ship dead.

No weapons can fire. Emergency batteries on board escape pods still allow them to be ejected. The engineer of the victim ship can attempt to restore the systems every minute with a –5% penalty each successive attempt. The systems will not come back themselves for another 2D6 hours. If the damage received is less than the AV of the craft...the ship is untouched.

ROF	3x shots /MR (ROF Bonus +2%)
Damage	8d6
Effective Range	1000km
Ammo	Sufficient deuterium tanking exists for up to 230 seconds of firing (20 MR)
Fail	96

Missile Systems Reference Table

Weapon	ROF	Damage	Effective Range	Ammo	Fail
AGM-204A TSAM	1	6d6/5m radius	20-60km	1	99
AGM-220 Hellhound	1	8d6/5m radius	30km	1	99
Mk 10 70mm Zeus	1	10d6/5m radius;	1.5km	1	97
Mk 16 150mm Banshee 70	1	M18: 6d6/5m radius; M451: 4d6/10m radius; M597: 8d6/3m radius; M598: 6d6/20m radius;	8km	16 tube launcher	97
AIM-90E Headlock	1	5d6/5m radius	15km	1	98
Mk 88 SGW	1	6d6/5m radius;	1.5km	1	97
ASAT-100 Predator	1	3d6x3/5m radius;	250km	1	98
Death Angel STGBM	1	Special (see description)	5000km	1	98
ASAT-120 Balmung	1	3d6x6/5m radius	1000km	1	98
ASAT-160 Gungnir	1	4d6x6/5m radius	2500km	1	98
ASM-88 Fenris	1	Conventional: 6d6x6/15m radius; Nuclear: 6d6x15 1km radius, x5 5km radius;	5000km	1	99

Kinetic Weapons Reference Table

Weapon	ROF	Damage	Effective Range	Ammo	Fail
25mm Chain Cannon Burst	100/MR	3d8	3.5km	20	99
VRF Gauss Cannon Burst	100/MR	4d6+6	5.5km	40	99
30mm Rail Cannon Burst	6/MR	2d6x10	100km	20	96
Orbital Minefield	n/a	2d6x10	Special	n/a	98

High Energy Weapons Reference Table

Weapon	ROF	Damage	Effective Range	Ammo	Fail
20 MW Plasma Cannon	3	2d6x6	300km	Runs from ships powerplant;	98
80 MW Infrared Laser	3	2d6x5	300km	Runs from ships powerplant;	98
40 MW Free Electron Laser	1	2d6x4	500km	Runs from ships powerplant;	98
800 MeV Particle Beam	3	2d6x4	1000km	Sufficient deuterium tanking exists for up to 230 seconds of firing (20 MR);	96

Space Vessels Gazetteer

Introduction

This gazetteer provides a guide to common classes of aerospace, interplanetary and interstellar vessels, both military and civilian, in use in the late 23rd Century. It is by no means exhaustive. Game Masters are encouraged to use these descriptions and statistics as a starting point for creating their own classes of space vessels.

AEROSPACE CRAFT A-Z

AS-88 Baldur Transport:

The AS-88 Baldur primarily performs the tactical portion of the aerospace-lift mission. The craft is capable of operating in a wide range of planetary environments, and is the UEAF's transport of choice for air dropping troops and equipment into hostile areas. The AS-88 operates throughout the UEAF, fulfilling a wide range of operational missions in both peace and war situations.

Basic and specialised versions of the AS-88 perform a diverse number of roles, including airlift support, troop resupply, aeromedical missions, and natural disaster relief missions.

General Characteristics

Primary Function:	Global Aerospace Lift
Contractor:	Consolidated Aerospace.
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	24.69 metres
Height:	8.9 metres
Wingspan:	31.7 metres
Max Velocity	
Atmospheric:	Mach 1.58
Orbital:	5g
Flight Ceiling:	Trans-atmospheric
Max Payload:	128 tons
Cargo Configurations:	8 pallets or 97 litters or 24 CDS bundles or 128 combat troops or 92 spacetroopers, or a combination of any of these up to the cargo compartment capacity or maximum allowable weight.
Crew:	3 (two pilots & loadmaster)

Sensors

Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km

Standard Weapon Systems: 4x AGM-204A Threat Suppression Attack Missiles;

Game Stats

Velocity: Cruise	07
: Afterburn	25
Manoeuvre:	-5 (-25%)
Autopilot:	50%
Battle Computer:	0
Initiative Modifier:	-5
Stealth:	0
ECM:	2 (-10%)
Fire Control:	1 (+5%)
Armor Value:	10

AS-90 Thor Light Gunship:

The AS-90 Thor is a quick-reacting, aerospace attack craft that can fight close and deep to destroy, disrupt, or delay enemy forces. The Thor is designed to fight and survive during the day, night, and in adverse conditions in a wide range of planetary environments. The principal mission of the Thor is the destruction of highvalue targets with either the AGM-220C Hellhound or the AIM90E Headlock Smart Missile. It is also capable of employing a 25mm chain cannon and 70mm ZEUS rockets that are lethal against a wide variety of targets.

General Characteristics

Primary Function:	Global Aerospace Lift
Contractor:	Aerospace attack
Power Plant:	Fusion

Propulsion

Atmospheric:	Scramrockets
Orbital:	Fusion rockets

Length:	12 metres
Height:	3.9 metres
Wingspan:	6.2 metres

Max Velocity

Atmospheric:	Mach 2.9
Orbital:	7g

Flight Ceiling: Trans-atmospheric

Max Payload: 500 kg

Cargo Configurations: N/A

Crew: 2 (pilot and co-pilot/gunner)

Sensors

Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km

Standard Weapon Systems: 2x AGM-220C Hellhound Smart missiles;
4x AIM90E Headlock Smart missiles;
2x 25mm chain cannon (fire linked);
8x 70mm ZEUS missiles;

Game Stats

Velocity: Cruise	15
: Afterburn	35
Manoeuvre:	1 (+5%)
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	2
Stealth:	2

ECM:	1 (-5%)
Fire Control:	5 (+10%)
Armor Value:	15

AS-110 Heimdall Ground Attack Craft:

The AS-110 Heimdall is specially designed for close aerospace support of ground forces. The primary mission of the AS-110 is to provide day and night close aerospace combat support for friendly land forces and to act as forward aerospace controller (FAC) to coordinate and direct friendly aerospace forces in support of land forces. The AS-110 has a secondary mission of supporting search and rescue and Special Forces operations. It also possesses a limited capability to perform certain types of interdiction. All of these missions may take place in a high or low threat environment.

With excellent manoeuvrability at low speeds and altitude, the AS-110 Heimdall is a highly accurate weapons-delivery platform. It can loiter near battle areas for extended periods of time and operate under 1,000-foot ceilings (300 metres).



General Characteristics

Primary Function:	Close Aerospace Support /Forward Aerospace Control
Contractor:	Consolidated Aerospace.
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	15.8 metres
Height:	4.82 metres
Wingspan:	11.32 metres
Max Velocity	
Atmospheric:	Mach 2.4
Orbital:	5.5g
Flight Ceiling:	Trans-atmospheric
Max Payload:	500kg
Cargo Configurations:	N/A.
Crew:	2 (pilot and co-pilot/gunner)
Sensors	
Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km

Standard Weapon Systems:	2x AGM-204A TSAMs; 2x AGM-220C Hellhound Smart missiles; 8x Mk 88 120mm SGW; 32x Mk 16 150mm Banshee missiles; 1x 25mm chain cannon;
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Game Stats

Velocity: Cruise	12
: Afterburn	28
Manoeuvre:	3 (+6%)
Autopilot:	50%
Battle Computer:	2 (+10%)
Initiative Modifier:	5
Stealth:	2
ECM:	2 (-10%)
Fire Control:	5 (+10%)
Armor Value:	15

AS-114 Valkyrie Dropship:

The AS-114 Valkyrie is the UEAF's front-line division level utility transport used for aerospace assault, combat drop and aeromedical evacuation units. First deployed in 2243, the Valkyrie's advanced technology makes it easy to maintain in the field. In addition, modified AS-114s operate as command and control, electronic warfare, and special operations platforms.

The AS-114, with a crew of three, can lift an entire 26-man fully-equipped infantry platoon in most planetary environments. It can be configured to carry 10 litters, by removing 20 troop seats, in the MedEvac role. Both the pilot and co-pilot are provided with armour protective seats. Protective armour on the Valkyrie can withstand hits from 25mm shells. The AS-114 has a magnetic cargo grapple for external lift missions. The AS-114A variant has all troop seats removed, allowing a AFV sized ground vehicle to be carried.

General Characteristics

Primary Function:	Aerospace assault, combat drop and aeromedical evacuation
Contractor:	Consolidated Aerospace.
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	17 metres
Height:	5.6 metres
Wingspan:	12.2 metres
Max Velocity	
Atmospheric:	Mach 4.9
Orbital:	10g
Flight Ceiling:	Trans-atmospheric
Max Payload:	50kg
Cargo Configurations:	N/A.
Crew:	2 (pilot and co-pilot/gunner)
Sensors	
Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	4x AGM-204A TSAMs; 4x Mk 88 120mm SGW; 32x Mk 16 150mm Banshee missiles; 1x 25mm chain cannon;

Game Stats

Velocity: Cruise	25
: Afterburn	35
Manoeuvre:	2 (+4%)
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	3
Stealth:	2
ECM:	3 (-15%)
Fire Control:	5 (+10%)
Armor Value:	15

AS-116 Vulture Aerospace Fighter:

The AS-116 is the standard aerospace superiority fighter in use by the UEAF. It is designed to penetrate enemy aerospace and achieve a first-look, first-kill capability against multiple targets. The AS-116 is characterised by a low-observable, highly manoeuvrable airframe; advanced integrated avionics; and aerodynamic performance allowing hypersonic cruise without afterburner.

General Characteristics

Primary Function:	Tactical Aerospace Fighter
Contractor:	Consolidated Aerospace.
Power Plant:	Fusion

Propulsion

Atmospheric:	Scramrockets
Orbital:	Fusion rockets

Length: 17 metres

Height: 5.6 metres

Wingspan: 12.2 metres

Max Velocity

Atmospheric:	Mach 4.9
Orbital:	10g

Flight Ceiling: Trans-atmospheric

Max Payload: 50kg

Cargo Configurations: N/A.

Crew: 2 (pilot and co-pilot/gunner)

Sensors

Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km

Standard Weapon Systems: 2x AGM-220C Hellhound Smart missiles;
4x AIM90E Headlock Smart missiles;
2x 10mm VRF Gauss cannons;

Game Stats

Velocity: Cruise 25

: Afterburn 51

Manoeuvre: 5 (+10%)

Autopilot: 50%

Battle Computer: 1 (+5%)

Initiative Modifier: 6

Stealth: 3

ECM: 2 (-10%)

Fire Control: 1 (+5%)

Armor Value: 10

AS-119 Buzzard Aerospace Superiority Fighter:

The AS-119 Buzzard is an extremely manoeuvrable, tactical fighter designed to gain and maintain aerospace superiority in aerial combat. The AS-119's aerospace superiority is achieved through a mixture of manoeuvrability and acceleration, range, weapons and avionics. Its weapons and flight control systems are designed so one person can safely and effectively perform aerospace combat. It can penetrate enemy defence and outperform and as of 2271 can outfight current or projected enemy aircraft.

The AS-119's superior manoeuvrability and acceleration are achieved through high engine thrust-to-weight ratio and low wing loading. Low wing-loading (the ratio of aircraft weight to its wing area) is a vital factor in manoeuvrability and, combined with the high thrust-to-weight ratio, enables the aircraft to turn tightly without losing airspeed.

General Characteristics

Primary Function: Tactical Aerospace Fighter

Contractor: LockMit Industries, Earth

Power Plant: Fusion

Propulsion

Atmospheric:	Scramrockets
Orbital:	Fusion rockets

Length: 18.2 metres

Height: 5.7 metres

Wingspan: 14.2 metres

Max Velocity

Atmospheric:	Mach 4.8
Orbital:	10g

Flight Ceiling: Trans-atmospheric

Max Payload: 50kg

Cargo Configurations: N/A.

Crew: 1

Sensors

Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	4x AIM90E Headlock Smart missiles; 4x 10mm VRF Gauss cannons;

Game Stats

Velocity: Cruise	24
: Afterburn	48
Manoeuvre:	7 (+14%)
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	8
Stealth:	2
ECM:	2 (-10%)
Fire Control:	1 (+5%)
Armor Value:	12

AS-122 Loki Special Operations Dropship:

The AS-122 Loki's primary wartime mission is combat search and rescue, covert infiltration, exfiltration and resupply of special operations forces in most environmental conditions. The AS-122 provides the capability of independent rescue operations in combat areas up to and including medium-threat environments. The basic crew normally consists of four: pilot, copilot, flight engineer, and crew chief. The craft can lift an entire 11-man fully-equipped infantry section in most planetary environments.

AS-122s are equipped with a magnetic rescue grapple for external lift missions with 200m cable and 500kg lift capacity.

Mission systems on the AS-122 make it ideally suited for operations with special warfare units, such as the Interstellar Colonial Marines Special Operations Arm. Combat-equipped personnel can be covertly inserted and/or extracted in any terrain with precise GPS navigation accuracy.



General Characteristics

Primary Function:	Combat search and rescue, infiltration, exfiltration and resupply of special operations forces
Contractor:	LockMit Industries, Earth
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	14.1 metres
Height:	4.2 metres
Wingspan:	11.1 metres
Max Velocity	
Atmospheric:	Mach 5.51
Orbital:	8g
Flight Ceiling:	Trans-atmospheric
Max Payload:	18 tons
Cargo Configurations:	N/A.
Crew:	4 (pilot; co-pilot/gunner; crew chief; flight engineer)
Sensors	
Ground:	20km
Space: Passive	3000km
Space: Active	1500km
Perimeter Alert:	30,000km
Comm Range:	5000km

Standard Weapon Systems:	4x AGM-204A TSAMs; 2x Mk 88 120mm SGW; 2x AIM90E Headlock Smart missiles; 1x 10mm VRF Gauss cannon;
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Game Stats

Velocity: Cruise	28
: Afterburn	40
Manoeuvre:	3 (+6%)
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	4
Stealth:	4
ECM:	3 (-15%)
Fire Control:	3 (+15%)
Armor Value:	12

AS-135 Tyr Orbital Bombardment Craft:

The AS-135 Tyr is the primary nuclear capable aerospace orbital bombardment craft in the UEAF inventory. It provides the only aerospace launched space to ground ballistic missile carriage in the UEAF.

The AS-135 also provides theatre CINCs with a long range strike capability. It can carry nuclear or conventional ordnance with planetary precision navigation capability. The AS-135s flexibility was evident during the Colonial Wars. AS-135s struck wide-area troop concentrations, fixed installations and bunkers, and decimated the morale of rebel forces.

General Characteristics

Primary Function:	Orbital and sub-orbital bombardment
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	41.5 metres
Height:	12.2 metres
Wingspan:	36.1 metres
Max Velocity	
Atmospheric:	Mach 1.51
Orbital:	3g
Flight Ceiling:	Trans-atmospheric
Max Payload:	200 tons
Cargo Configurations:	N/A.
Crew:	5 (commander, pilot, navigator, electronic warfare officer, weapons officer)
Sensors	
Ground:	20km
Space: Passive	5000km
Space: Active	2500km
Perimeter Alert:	40,000km
Comm Range:	10,000km
Standard Weapon Systems:	20x Death Angel STG ballistic missiles; 10x AGM220C Hellhound Smart missiles; 2x AIM90E Headlock Smart missiles; 1x 30mm Rail cannon;

Game Stats

Velocity: Cruise	8
: Afterburn	16
Manoeuvre:	-5 (-10%)
Autopilot:	70%
Battle Computer:	2 (+10%)
Initiative Modifier:	-3
Stealth:	4
ECM:	5 (-25%)
Fire Control:	3 (+15%)
Armor Value:	20

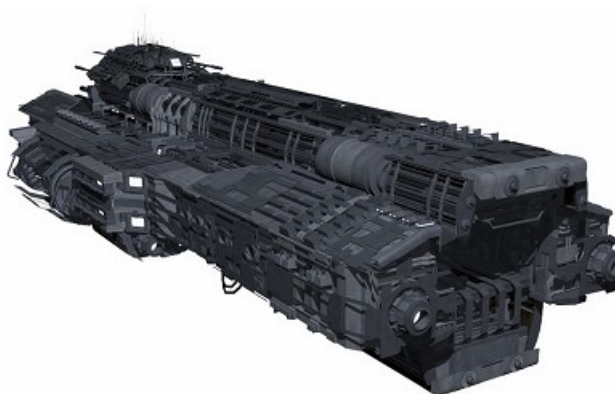
AS-141 Heavy Load Lifter:

The AS-141 Heavy Load Lifter is the workhorse of the UEAF. The AS-141 fulfils the vast spectrum of transport requirements through its ability to carry combat forces over long distances, inject those forces and their equipment either by landing or aerospacedrop, re-supply employed forces, and extract the sick and wounded from the hostile area to advanced medical facilities.

The AS-141, operated by the UEAF Aerospace Command, can transport combat forces, equipment and supplies, and deliver them on the ground or by aerospace-drop, using doors on each side and a rear loading ramp. It can be used for low-altitude delivery of paratroops and equipment, and high-altitude delivery of paratroops. It can also airdrop equipment and supplies using the container delivery system.

Its cargo compartment can easily be modified to perform around 30 different missions. About 200 troops or 155 fully equipped spacetroopers can be easily accommodated. Rollers in the floor allow quick and easy cargo pallet loading. A palletized lavatory and galley can be installed quickly to accommodate passengers, and when palletized cargo is not being carried, the rollers can be turned over to leave a smooth, flat surface for loading vehicles.

Variants of the AS-141 have found their way into wide-scale commercial use.



General Characteristics

Primary Function:	Global Aerospace Lift
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	64.69 metres
Height:	15.9 metres
Wingspan:	56.7 metres
Max Velocity	
Atmospheric:	Mach 1.29
Orbital:	3g
Flight Ceiling:	Trans-atmospheric
Max Payload:	256 tons
Cargo Configurations:	12 pallets or 130 litters or 40 CDS bundles or 200 combat troops or 155 spacetroopers, or a combination of any of these up to the cargo compartment capacity or maximum allowable weight.
Crew:	3 (two pilots & loadmaster)
Sensors	
Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	4x AGM-204A Threat Suppression Attack Missiles;
Game Stats	
Velocity: Cruise	7
: Afterburn	15
Manoeuvre:	-8 (-16%)
Autopilot:	50%
Battle Computer:	0
Initiative Modifier:	-8
Stealth:	0
ECM:	2 (-10%)
Fire Control:	1 (+5%)
Armor Value:	10

ERC-60 Black Widow Fighter:

Based on captured UEAF craft from during the Colonial Wars, the ERC-60 Black Widow is a two-seat, multi-mission fighter/attack aircraft that can operate from either aerospace carriers or planetary bases. The ERC-60 fills a variety of roles: aerospace superiority, fighter escort, reconnaissance, suppression of enemy defences, forward aerospace control, close and deep aerospace support, and day and night strike missions.

The ERC-60 has heavier armour than it's UEAF counterpart, the AS-116 Vulture, but consequently is marginally slower.

General Characteristics

Primary Function:	Tactical Aerospace Fighter
Contractor:	Eurasian Rimworlds Combine
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	15 metres
Height:	5.2 metres
Wingspan:	11.4 metres
Max Velocity	
Atmospheric:	Mach 4.7
Orbital:	9.5g
Flight Ceiling:	Trans-atmospheric
Max Payload:	50kg
Cargo Configurations:	N/A.
Crew:	2 (pilot / navigator-gunner)
Sensors	
Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x AGM Smart missiles; 4x AIM Smart missiles; 2x 10mm Chain cannons;

Game Stats

Velocity: Cruise	24
: Afterburn	48
Manoeuvre:	4 (+8%)
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	5
Stealth:	2
ECM:	2 (-10%)
Fire Control:	1 (+5%)
Armor Value:	12

ERC-70 Arachnid Dropship:

The mission of the ERC70 is to provide assault transport of combat troops, supplies, and equipment during planetary assault and subsequent operations on the ground. Troop assault is the primary function and the movement of supplies and equipment is secondary. Additional tasks are: combat and assault support for evacuation operations and other special operations; support for mobile refuelling and rearming points; aeromedical evacuation of casualties from the field to suitable medical facilities.



NEW HORIZON, core rules 6.2 – volume 2

General Characteristics

Primary Function:	Aerospace assault, combat drop and aeromedical evacuation.
Contractor:	Eurasian Rimworlds Combine
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	19.1 metres
Height:	5.2 metres
Wingspan:	15.1 metres
Max Velocity	
Atmospheric:	Mach 4.7
Orbital:	7g
Flight Ceiling:	Trans-atmospheric
Max Payload:	64 tons
Cargo Configurations:	Combat: maximum of 35 troops Medical evacuation: 15 litters and 2 attendants
Crew:	3 (pilot, co-pilot/gunner, crew chief)
Sensors	
Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	4x AGM-204A TSAMs; 4x Mk 88 120mm SGW; 32x Mk 16 150mm Banshee missiles; 1x 25mm chain cannon;

Game Stats

Velocity: Cruise	23
: Afterburn	35
Manoeuvre:	2 (+4%)
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	3
Stealth:	2
ECM:	3 (-15%)
Fire Control:	5 (+10%)
Armor Value:	16

ERC-80 Harvestman Heavy Gunship:

The Harvestman is designed as a heavy planetary assault gunship, with its primary missions being battlefield interdiction and aerospace attack. What it lacks in speed and manoeuvrability, it more than makes up for in weapons and armour. HHGs are equipped with a variety of weapons, including heavy machine guns and missiles, and plasma cannons.

General Characteristics

Primary Function:	Battlefield interdiction
Contractor:	Eurasian Rimworlds Combine
Power Plant:	Fusion
Propulsion	
Atmospheric:	Scramrockets
Orbital:	Fusion rockets
Length:	26 metres
Height:	10.9 metres
Wingspan:	9.2 metres
Max Velocity	
Atmospheric:	Mach 2.4
Orbital:	5g
Flight Ceiling:	Trans-atmospheric
Max Payload:	1000kg
Cargo Configurations:	N/A.
Crew:	2 (pilot and co-pilot/gunner)

NEW HORIZON, core rules 6.2 – volume 2

Sensors

Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km

Standard Weapon Systems:	2x AGM-220C Hellhound Smart missiles; 4x AIM90E Headlock Smart missiles; 1x 25mm chain cannon; 8x 70mm ZEUS missiles;
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Game Stats

Velocity: Cruise	12
: Afterburn	26
Manoeuvre:	0
Autopilot:	50%
Battle Computer:	1 (+5%)
Initiative Modifier:	1
Stealth:	2
ECM:	3 (-15%)
Fire Control:	5 (+10%)
Armor Value:	20

Orbital Shuttle:

There are countless makes and model of orbital shuttlecraft, but all are built for the same purpose: transport and transfer of cargo and personnel from orbit to surface, and from one orbital location to another. The below statistics are for the most common types. Game Masters are encouraged to vary these statistics as they see fit.

General Characteristics

Primary Function:	Orbital Transport
Contractor:	Varies
Power Plant:	Fusion

Propulsion

Atmospheric:	Scramrockets
Orbital:	Fusion rockets

Length:	45 metres
Height:	12. 2 metres
Wingspan:	21.4 metres

Max Velocity

Atmospheric:	Mach 1.7
Orbital:	3g

Flight Ceiling:	Trans-atmospheric
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Max Payload:	10 tons
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Cargo Configurations:	Civilian transport: 52 passengers Cargo transport: 10 tons internal
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Crew:	2 (pilot /co-pilot-navigator)
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Sensors

Ground:	20km
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km

Standard Weapon Systems:	None.
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Game Stats

Velocity: Cruise	08
: Afterburn	16
Manoeuvre:	2 (+4%)
Autopilot:	50%
Battle Computer:	0
Initiative Modifier:	4
Stealth:	0
ECM:	0

Fire Control:	0
Armor Value:	8

Suborbital Transport Vehicle (STV):

Built by Consolidated Aerospace based on an existing suborbital military scouting vehicle, the STV is about the size of a 20th century truck. It uses four vectored thrust engines to provide it with lift (and steering) and two jet engines for its main propulsion system. The vectored thrust engines enable the STV to hover and to manoeuvre with great precision.

A STV can carry up to two crew and six passengers or it can carry a comparable amount of cargo. STVs are equipped with a fairly extensive electronics array which includes radar, ladar, night vision and other navigation equipment. STVs are used as fast personnel and cargo transports, and are fully pressurised, capable of supporting a full compliment of passengers for 96 hours.

General Characteristics

Primary Function:	Sub-orbital Transport
Contractor:	Varies
Power Plant:	Fusion
Propulsion	
Atmospheric:	Vectored thrust engines
Length:	8 metres
Height:	3.2 metres
Wingspan:	12.4 metres
Max Velocity	
Atmospheric:	Mach 1.7
Orbital:	3g
Flight Ceiling:	500km
Max Payload:	10 tons
Cargo Configurations:	Civilian transport: 6 passengers Cargo transport: 1 ton internal
Crew:	1 (pilot)
Sensors	
Ground:	20km
Air:	2000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	08
: Afterburn	16
Manoeuvre:	2 (+4%)
Autopilot:	50%
Battle Computer:	0
Initiative Modifier:	5
Stealth:	0
ECM:	0
Fire Control:	0
Armor Value:	6

INTERPLANETARY CRAFT A-Z

Clipper:

Clippers are very-fast in-system cargo vessels.

Limited in their bulk freight carrying capacities, these small, fast ships are ideally suited to low-volume, high-profit goods, such as luxury items, precious metals and gems. Most clipper class ships require only a small crew, and are manufactured by almost all the major spacecraft contractors, so their exact configuration varies widely.

General Characteristics

Primary Function:	In system cargo transport
Contractor:	Varies
Power Plant:	Fusion

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Propulsion

Orbital: Fusion rockets

Length: 35 metres

Height: 12. 2 metres

Beam: 16.4 metres

Max Velocity

Orbital: 3g

Max Payload: 10 tons

Cargo Configurations: Civilian transport: 52 passengers

Cargo transport: 100 tons internal

Crew: 3 (pilot, co-pilot-navigator, engineer)

Sensors

Space: Passive 3000km

Space: Active 300km

Perimeter Alert: 50,000km

Comm Range: 5000km

Standard Weapon Systems: None.

Game Stats

Velocity: Cruise 08

: Full Thrust 16

Manoeuvre: 2 (+2%)

Autopilot: 50%

Battle Computer: 0

Initiative Modifier: 4

Stealth: 0

ECM: 0

Fire Control: 0

Armor Value: 20

Cutter:

Cutters are fast, lightly armed vessels used chiefly for in-system patrol work. They perform missions such as rendering aid to people and property in distress in deep space, protecting colonial assets and orbital facilities, and stopping and boarding vessels suspected of violating ITC quarantine laws. Cutters are also used to enforce federal laws in star systems under UEF jurisdiction. A standard Cutter has a crew of 3 (pilot, co-pilot/navigator, engineer, weapons officer) and can carry up to 15 passengers, albeit in cramped conditions.

General Characteristics

Primary Function: In system patrol craft

Contractor: Varies

Power Plant: Fusion

Propulsion

Orbital: Fusion rockets

Length: 45 metres

Height: 12. 2 metres

Beam: 21.4 metres

Max Velocity

Orbital: 2.8g

Max Payload: 10 tons

Cargo Configurations: Patrol: 15 ColSec troopers

Search & Rescue: 3 Paramedics, room for 12 passengers.

Crew: 3 (pilot, co-pilot-navigator, engineer)

Sensors

Space: Passive 5000km

Space: Active 3000km

Perimeter Alert: 50,000km

Comm Range: 5000km

Standard Weapon Systems: 1x 30mm rail cannon; 4x ASAT-100 Predators.

Game Stats

Velocity: Cruise 07

: Full Thrust 14

Manoeuvre: 2 (+2%)

Autopilot:	50%
Battle Computer:	1
Initiative Modifier:	1
Stealth:	0
ECM:	0
Fire Control:	1
Armor Value:	20

In-System Freighter:

Interplanetary cargo haulers are used mainly in star systems with colonies on multiple worlds. They come in a myriad of shapes and sizes, but the example given here is the Federated Boeing Interstellar ISF-122A Intra-Solar Freighter. The ISF122A is typical of intra-solar freighter design, built in great numbers during the mid 22nd century. A testament to their legendary durability is that many of these ships are still in service over a century later.

General Characteristics

Primary Function:	In system cargo hauler
Contractor:	Federated Boeing Interstellar
Power Plant:	Fusion
Propulsion	
Orbital:	Fusion rockets
Length:	60 metres
Height:	14 metres
Beam:	26 metres
Max Velocity	
Orbital:	2.2g
Max Payload:	500 tons
Cargo Configurations:	500 tons in 2x250 ton cargo bays
Crew:	3
Sensors	
Space: Passive	5000km
Space: Active	3000km
Perimeter Alert:	50,000km
Comm Range:	5000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	06
: Full Thrust	12
Manoeuvre:	-2 (-4%)
Autopilot:	50%
Battle Computer:	1
Initiative Modifier:	0
Stealth:	0
ECM:	0
Fire Control:	0
Armor Value:	20

Space Liner:

Large commercial ships, designed to carry passengers on a regular interplanetary route, space liners range in size from small 'planetary express' craft with a passenger capacity of up to 100, to large luxury cruise-liners, that can carry 1000s of passengers. The example given here is the Federated Boeing Interstellar IP44 Planet Express.

The IP44 is a small passenger transport used heavily in the Sol system on the busy EarthMars and Earth-Moon runs. The IP44 requires a crew of three (pilot, co-pilot/ navigator and flight engineer) and usually has up to four cabin staff to look after passengers.

General Characteristics

Primary Function:	In system passenger transport
Contractor:	Federated Boeing Interstellar
Power Plant:	Fusion
Propulsion	
Orbital:	Fusion rockets
Length:	50 metres

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Height:	11 metres
Beam:	21.4 metres
Max Velocity	
Orbital:	1g
Max Payload:	50 tons
Cargo Configurations:	Earth-Mars run: 112 passengers in cryo-berths Earth-Moon run: 156 passengers in seating
Crew:	3
Sensors	
Space: Passive	5000km
Space: Active	3000km
Perimeter Alert:	50,000km
Comm Range:	5000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	03
: Full Thrust	06
Manoeuvre:	-2 (-4%)
Autopilot:	50%
Battle Computer:	1
Initiative Modifier:	0
Stealth:	0
ECM:	0
Fire Control:	0
Armor Value:	12

Yacht:

Any of a range of relatively small interplanetary vessels, generally with sleek, graceful lines, used by the rich and famous for pleasure cruises or racing. The type given here as an example is the Richter Dynamics Star-Runner 2300. The Star-Runner 2300 requires a crew of two, but ideally runs with the addition of a flight engineer.



General Characteristics

Primary Function:	Pleasure cruiser
Contractor:	Federated Boeing Interstellar
Power Plant:	Fusion
Propulsion	
Orbital:	Fusion rockets
Length:	30 metres
Height:	11 metres
Beam:	16 metres
Max Velocity	
Orbital:	3g
Max Payload:	20 tons
Cargo Configurations:	20 tons in cargo bay
Crew:	2 (pilot /co-pilot)
Sensors	
Space: Passive	5000km
Space: Active	3000km
Perimeter Alert:	50,000km
Comm Range:	5000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	07
: Full Thrust	14
Manoeuvre:	1 (+2%)
Autopilot:	50%
Battle Computer:	1
Initiative Modifier:	0

Stealth:	0
ECM:	0
Fire Control:	0
Armor Value:	10

INTERSTELLAR CRAFT A-Z

CA1331 'Star Mule IV' Interstellar Transport:

The Consolidated Aerospace Star Mule was one of the first generation of high-capacity interstellar cargo transporters, and during its life has undergone a number of major changes. Like its larger cousin the Federated Boeing Interstellar Sherpa, the CA1331 provides point to point transportation of equipment and supplies to the many colony worlds throughout Federation space and beyond.

To reduce crew workload, and increase efficiency and safety, the majority of Colonial Transport ships are almost completely automated, requiring only a small crew to perform basic navigational duties like orbital insertion, or to carry out in-flight repairs should they be needed.



Almost all the ship mass not devoted to the interstellar drive is committed to cargo transportation. The cargo section is divided up into ten cargo bays, each capable of housing up to 500 tons of cargo in a wide variety of configurations.

General Characteristics

Primary Function:	Colonial Transport
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	FSD44
Length:	412 metres
Height:	40 metres
Beam:	62 metres
Max Velocity	
Realspace:	1g
Interstellar:	0.47LY/day (EST)
Max Payload:	5,000 tons
Cargo Configurations:	10x cargo bays each capable of housing up to 500 tons.
Crew:	5
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	10,000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	03
: Full Thrust	05
Manoeuvre:	-10 (-20%)
Autopilot:	70%
Battle Computer:	1
Initiative Modifier:	-8
Stealth:	0
ECM:	1
Fire Control:	0

Armor Value: 25

CG91 Zeus Class Guided Missile Cruiser:

In service in the UEAF fleet since before the Colonial Wars, the primary mission of the Zeus-class guided missile cruiser is to operate offensively in the presence of deep space, aerospace and planetary threats. This mission may be performed independently or in support of space-lift convoys, high-speed aerospace carrier task forces, or planetary assault task forces. With a fully integrated combat system, it has the capabilities to quickly detect modern threat platforms, perform high-speed data processing and employ powerful weaponry.

The Zeus is equipped with an extensive array of weapons systems. They have the older ASAT-120 Balmung launchers as well as ASAT-160 Gungnir (both fore and aft), and anti-ship capability with the ASM-88 Fenris. Four 30mm rail cannons and four 40mW laser turrets (fore and aft) provide defence against incoming threats. The CG91 is also equipped with passive electronic surveillance and jamming systems unequalled by any other cruiser in the UEAF fleet. These weapons and sensors give them the ability to attack and defend against targets that are over 5000km away while being able to protect against close range attacks.



General Characteristics

Primary Function:	Guided missile cruiser
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-6 F-Drive
Length:	475 metres
Height:	26.2 metres
Beam:	38.7 metres
Max Velocity	
Realspace:	1g
Interstellar:	0.47LY/day (EST)
Max Payload:	500 tons
Cargo Configurations:	Standard config: 2x AS-114 Valkyries; 2x AS-90 Thors. Troop config: 4x AS-114 Valkyries.
Crew:	16
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	10,000km
Standard Weapon Systems:	2x ASM-88 launchers; 4x ASAT-160 launchers 4x ASAT-120 launchers; 4x 30mm rail cannon turrets; 4x 40mW laser turrets; 20x Death Angel STGBMs.

Game Stats

Velocity: Cruise	04
: Full Thrust	06
Manoeuvre:	-10 (-20%)
Autopilot:	70%
Battle Computer:	4
Initiative Modifier:	-6
Stealth:	1
ECM:	4
Fire Control:	6
Armor Value:	55

CL90 Hephaestus Class Light Cruiser:

These multi-mission ships are capable of sustained combat operations in any combination of Anti-Aerospace, Deep Space, Anti-Surface, and Strike warfare environments. They are built to be employed in support of Carrier Battle Groups, Planetary Assault Groups, as well as interdiction and escort missions.

The Hephaestus class was initially designated as a Destroyer (DD), but was redesignated as a Light Cruiser (CL) after the end of the Colonial Wars. It brings a capability to the Fleet which significantly strengthens Battle Group operation effectiveness, defence, and survivability. The CL90 is equipped with an impressive array of weapon systems, including ASAT-120 Balmung and ASAT-160



Gungnir launchers (ventral and dorsal), which allows it a long range strike mission capability of ranges up to 2500km. In addition to its missile batteries, the CL90 also mounts four 20 MW Plasma Cannon batteries, four 40mW laser turrets and four 30mm Rail Cannon turrets, for use against incoming missiles and aerospace craft, or to bombard orbital targets. For orbital bombardment of planetary targets, the CL90 carries 20 Death Angel STGBMs.

The CL90 usually carries a company strength unit of colonial marines for boarding actions, and it's hanger bays can accommodate up to four dropship sized craft.

General Characteristics

Primary Function:	Multi-mission light cruiser
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-6 F-Drive
Length:	402 metres
Height:	35 metres
Beam:	54 metres
Max Velocity	
Realspace:	1g
Interstellar:	0.47LY/day (EST)
Max Payload:	300 tons
Cargo Configurations:	Standard config: 4x AS-114 Valkyries. 1x company (110) fully equipped marines
Crew:	12
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-120 launchers; 2x ASAT-160 launchers; 4x 20 MW Plasma Cannon batteries 4x 30mm rail cannon turrets; 4x 40mW laser turrets.

Game Stats

Velocity: Cruise	04
: Full Thrust	06
Manoeuvre:	-10 (-20%)
Autopilot:	70%
Battle Computer:	4
Initiative Modifier:	-6
Stealth:	1
ECM:	4
Fire Control:	6
Armor Value:	60

CPA14 Apollo Class Planetary Assault Transport:

The primary mission of the CPA14 Apollo is to land and sustain Spaceborne Assault Infantry and Interstellar Colonial Marines on any planet during hostilities. The ships serve as the centrepiece of a multi-ship Planetary Assault Readiness Group (PARG). The CPA14 is designed to maintain what the UEAF calls "tactical integrity" getting a balanced force to the same place at the same time. One CPA14 can carry a complete regiment of assault troops, along with the supplies and equipment needed in an assault, and land them from orbit by aerospace craft. Whether the landing force is involved in an armed conflict, acting as a deterrent force in an unfavourable political situation or serving in a humanitarian mission, the class offers tactical versatility.



The Apollo class can simultaneously fulfil a wide variety of mission requirements: flagship for embarked planetary assault squadron; planetary assault launching platform, employing a variety of aerospace craft; hospital ship, equivalent to the UEF's finest local hospitals with 17 ICU beds, 4 operating rooms, 300 beds, blood bank, full dental facilities, and orthopaedics, trauma, general surgery, and x-ray capabilities; command and control ship, with the UEAF's most sophisticated satellite communications capability; and assault provisions carrier able to sustain embarked forces with fuel, ammunition and other supplies.

General Characteristics

Primary Function:	Planetary assault transport
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Transtech-A10 F-Drive
Length:	437 metres
Height:	78 metres
Beam:	106 metres
Max Velocity	
Realspace:	1g
Interstellar:	0.47LY/day (EST)
Max Payload:	10,000 tons
Cargo Configurations:	Flight deck with room for up to 35 aerospace craft of varying types; Infantry Transport: 1x regiment of fully equipped spaceborne infantry or colonial marines (up to 1500 personnel) and associated ground vehicles, supplies and equipment. Armor Transport: 1x armour battalion, 1x battlesuit battalion, 1x artillery battalion.
Crew:	40
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	8x 30mm Rail Cannon turrets; 4x 40 MW Free Electron Laser turrets; 2x ASAT-100 Predator launchers.

Game Stats

Velocity: Cruise	04
: Full Thrust	06
Manoeuvre:	-10 (-20%)
Autopilot:	70%
Battle Computer:	1
Initiative Modifier:	-9

Stealth:	1
ECM:	3
Fire Control:	2
Armor Value:	40

CSS12 Combat Support Ship

The mission of the CSS12 is the support of operating forces by providing refrigerated stores, dry provisions, technical spares, general stores, fleet freight, mail and personnel by alongside or aerospace transport replenishment means. During combat operations these vessels also transport and deliver bombs, bullets, missiles, mines, projectiles, energy cells and various other explosive devices and incendiaries, as well as associated ordnance cargo to the various ships in the Fleet, while underway. This type of support is necessary in order to achieve and maintain the UEAF's requirement for a high degree of fleet logistical independence.



The CSS14 has four cargo holds, each of which can break down into 14 self-contained magazines. A magazine is the level within the cargo hold, and is defined as a magazine due to the stowage of ammunition and the requisite fire detecting and fire fighting items found on each level. The four cargo holds are serviced by six high speed cargo elevators. The ships have a flight deck and can handle any UEAF military aerospace craft up to and including the AS-88 Baldur as well as most commercial aerospace craft. There are 7 Underway Replenishment (UNREP) cargo transfer stations and 1 fuel delivery station.

General Characteristics

Primary Function:	Combat support
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Transtech-A10 F-Drive
Length:	382 metres
Height:	43 metres
Beam:	112 metres
Max Velocity	
Realspace:	1g
Interstellar:	0.47LY/day (EST)
Max Payload:	10,000 tons
Cargo Configurations:	Fleet supply: 4x cargo holds, each capable of holding 2500 tons. Ammunition: 56 magazines. Fuel: 56 fuel rod containers.
Crew:	26
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x 30mm Rail Cannon turrets; 2x 40 MW Free Electron Laser turrets;

Game Stats

Velocity: Cruise	03
: Full Thrust	05
Manoeuvre:	-10 (-20%)
Autopilot:	70%
Battle Computer:	1
Initiative Modifier:	-9
Stealth:	1
ECM:	3
Fire Control:	2
Armor Value:	35

CV17 Hera Class Aerospace Carrier

Twelve aerospace carriers form the centrepiece of the UEAF Interstellar Fleet. In addition to their power-projection role, they serve as joint command platforms in the interstellar command-and-control network. Each UEAF fleet battlegroup is usually formed around one of these ships.

The carrier aerospace wing can destroy enemy craft, ships, and planetary targets. Aerospace craft are used to conduct strikes, support ground battles, protect the battle group or other friendly shipping, implement a space or orbital blockade. The aerospace wing provides a visible presence to demonstrate UEF power and resolve in a crisis. The ship normally operates as the centrepiece of a carrier battle group commanded by a flag officer embarked in the carrier and consisting of four to six other ships, including guided missile cruisers, destroyers, frigates, support ships and corvettes.

The Hera-class self-defence measures includes missiles, guns, and electronic warfare. The ASAT-100 Missile System is comprised of two launchers with eight missiles each. Hera-class also has 24x Close-In Weapon System mounts for short range defence against aerospace craft or missiles. Each mount has its own search and track radar, and a 30mm railgun.



A typical carrier aerospace wing consists of approximately 85 craft. 60 of these are tactical strike craft, with the remaining 25 made up of assorted support and specialist craft.

General Characteristics

Primary Function:	Aerospace carrier
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-7 F-Drive
Length:	612 metres
Height:	82.4 metres
Beam:	154 metres
Max Velocity	
Realspace:	1g
Interstellar:	0.47LY/day (EST)
Max Payload:	10,000 tons
Cargo Configurations:	Aerospace wing consisting 85 assorted craft.
Crew:	116
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	24x 30mm Rail Cannon turrets; 2x ASAT-100 Predator launchers;

Game Stats

Velocity: Cruise	03
: Full Thrust	05
Manoeuvre:	-15 (-30%)
Autopilot:	70%
Battle Computer:	3
Initiative Modifier:	-12
Stealth:	0
ECM:	5
Fire Control:	4
Armor Value:	60

DD71 Ares Class Destroyer

The DD71 destroyer replaced the DD58 class of destroyer at the end of Colonial Wars. The DD71 is a true fleet destroyer, capable of handling any mission that a Fleet commander might ask, from key wartime missions in planetary attack and orbital to deep space warfare to the equally important noncombatant evacuations, escort, and diplomatic missions that have been closely associated with UEA fleet destroyers since its inception.

The Ares is a multi-mission ship, capable of providing forward presence and deterrence, and operating as a vital part of fleet forces to gain battlespace and orbital dominance. Armed with the ASAT-100 Predator and the ASAT-120 Balmung missile systems, the DD71 is able to engage targets up to distances of 1000km.



The ship's hangar bay typically houses two Valkyrie class dropships, as well as a system of unmanned aerial vehicles (UAV). In concert with other ships, the DD71 contributes surveillance and force to establish and maintain orbital superiority.

Along with the DDC44 Hermes Class corvette and FF77 Artemis Class frigate, the DD71 forms the backbone of the ICM rapid reaction fleet deployed throughout the Federal Colonies.

General Characteristics

Primary Function:	Destroyer
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-12 F-Drive
Length:	345 metres
Height:	61 metres
Beam:	44 metres
Max Velocity	
Realspace:	2g
Interstellar:	0.47LY/day (EST)
Max Payload:	1,000 tons
Cargo Configurations:	ICM CSAR: 1x platoon of marines, 2x Valkyrie class dropships. Troop carrier: cryopods for 150 passengers.
Crew:	7
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-100 Predator launchers; 2x ASAT-120 Balmung launchers; 2x 30mm Rail Cannon turrets; 2x 40MW Free Electron Laser turrets; 2x 80mW Infrared Laser turrets. 10x STGBMs

Game Stats

Velocity: Cruise	06
: Full Thrust	09
Manoeuvre:	-5 (-10%)
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	-3
Stealth:	2
ECM:	2
Fire Control:	5
Armor Value:	40

DDC44 Hermes Class Fast Corvette:

Small for a capital ship, highly manoeuvrable and lightly armed, the Hermes class corvette was designed to perform deep space operations such as anti-pirate operations or convoy escort with minimal support assets. Only 4 years old, built by contract by WolfWeisner-Krupp, the Hermes is the first UEAF spacecraft built by a corporation other than the mighty Consolidated Aerospace Mars or one of its subsidiaries.

The DDC44's hull design incorporates shaping techniques that reduce radar cross-section to reduce detectability and likelihood of being targeted by enemy weapons and sensors. The hangar bay usually carried two Valkyrie class dropships, though can only launch/land one at a time, as the ship only has one droplock.

General Characteristics

Primary Function:	Corvette
Contractor:	Wolf-Weisner-Krupp
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-12 F-Drive
Length:	232 metres
Height:	45 metres
Beam:	36 metres
Max Velocity	
Realspace:	2.5g
Interstellar:	0.47LY/day (EST)
Max Payload:	1,000 tons
Cargo Configurations:	ICM CSAR: 1x platoon of marines, 2x Valkyrie class dropships. Troop carrier: cryopods for 150 passengers.
Crew:	7
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-100 Predator launchers; 2x ASAT-120 Balmung launchers; 4x 30mm Rail Cannon turrets; 2x 80mW Infrared Laser turrets. 10x STGBMs

Game Stats

Velocity: Cruise	06
: Full Thrust	12
Manoeuvre:	-5 (-10%)
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	-3
Stealth:	2
ECM:	2
Fire Control:	5
Armor Value:	35

ERC100 Kirov Class Corvette:

The ERC100 Kirov Class Corvette is the backbone of the ERC fleet. The general hull design appears to be identical to the ERC-80 (Luhai class) missile destroyer, though with a slightly smaller displacement.

The ERC-100 is capable of handling any mission that a Fleet commander might ask, from key wartime missions in planetary attack and orbital to deep space warfare to equally important non-combatant evacuations, escort, and diplomatic missions.

Armed with four RIF51 ventral/dorsal launching systems (similar to the ASAT-100 Predator missile), and two RIF44 forward facing launchers (ERC equivalent of the ASAT-120 Balmung), the Kirov can engage targets at ranges up to 1000km. For close-in fighting and defence, the Kirov mounts 30mm rail cannons and 40MW Free Electron Lasers.

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The ship's hangar bay typically houses two Arachnid class dropships, as well as a system of unmanned aerial vehicles (UAV). The ship lacks the radar cross-section reduction features found on the ERC-80, and exact powerplant arrangement of the ship is unknown.

General Characteristics

Primary Function:	Corvette
Contractor:	Eurasian Rimworlds Combine
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Unknown
Length:	258 metres
Height:	52 metres
Beam:	47 metres
Max Velocity	
Realspace:	2.5g
Interstellar:	0.47LY/day (EST)
Max Payload:	1,000 tons
Cargo Configurations:	Unknown
Crew:	7 (estimate)
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-100 Predator launchers; 2x ASAT-120 Balmung launchers; 4x 30mm Rail Cannon turrets; 2x 80mW Infrared Laser turrets. 10x STGBMs

Game Stats

Velocity: Cruise	06
: Full Thrust	12
Manoeuvre:	-5 (-10%)
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	-3
Stealth:	2
ECM:	2
Fire Control:	5
Armor Value:	35

ERC200 Lanzhou Class Missile Cruiser:

The Lanzhou class missile cruiser is one of the biggest warships of the ERC fleet. The appearance of the Lanzhou class was a significant factor in the UEAF recommissioning and upgrading of the Zeus class.

This ship has an impressive armament of missiles and guns as well as electronics. Lanzhou's main weapons are four RIF-19 'Shipwreck' ASM missile launchers mounted fore and aft, designed to engage capital targets at ranges up to 5000km. Aerospace and missile defence is provided for with six RIF-59 launchers, Two 30mm railgun turrets and the Kashstan plasma gun system (6x plasma gun turrets).

General Characteristics

Primary Function:	Guided missile cruiser
Contractor:	Eurasian Rimworlds Combine
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Unknown
Length:	455 metres
Height:	24.5 metres
Beam:	33 metres
Max Velocity	
Realspace:	1.5g

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Interstellar:	0.47LY/day (EST)
Max Payload:	500 tons
Cargo Configurations:	Standard config: 2x ERC-70 Arachnids; 2x ERC-80 Harvestmen. Troop config: 4x ERC-70 Arachnids.
Crew:	16
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	10,000km
Standard Weapon Systems:	4x RIF-19 ASM launchers; 6x RIF-59 ASAT launchers 2x 30mm rail cannon turrets; 6x 20mW plasma turrets.

Game Stats

Velocity: Cruise	05
: Full Thrust	07
Manoeuvre:	-8 (-16%)
Autopilot:	60%
Battle Computer:	3
Initiative Modifier:	-5
Stealth:	2
ECM:	3
Fire Control:	5
Armor Value:	50

Federated Boeing Interstellar ‘Sherpa’ Class Colonial Transport:

Behemoths of the space lanes, the Sherpa class colonial transports provides point to point transportation of equipment and supplies to the many colony worlds throughout Federation space and beyond.

To reduce crew workload, and increase efficiency and safety, the majority of Colonial Transport ships are almost completely automated, requiring only a small crew to perform basic navigational duties like orbital insertion, or to carry out in-flight repairs should they be needed.

Almost all the ship mass not devoted to the interstellar drive is committed to cargo transportation. The cargo section is divided up into ten cargo bays, each capable of housing up to 1000 tons of cargo in a wide variety of configurations.

General Characteristics

Primary Function:	Colonial Transport
Contractor:	Federated Boeing Interstellar
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nebulon-4
Length:	800 metres
Height:	60 metres
Beam:	100 metres
Max Velocity	
Realspace:	0.8g
Interstellar:	0.47LY/day (EST)
Max Payload:	10,000 tons
Cargo Configurations:	10x cargo bays each capable of housing up to 1000 tons.
Crew:	7
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	10,000km
Standard Weapon Systems:	None.
Game Stats	
Velocity: Cruise	02
: Full Thrust	03

Manoeuvre:	-15 (-30%)
Autopilot:	70%
Battle Computer:	1
Initiative Modifier:	-13
Stealth:	0
ECM:	1
Fire Control:	0
Armor Value:	30

FF77 Artemis Class Frigate:

First deployed by the UEAF over a decade ago, the Artemis class frigate was designed as an escort ship for larger vessels or as an insystem picket ship, with it's primary mission profile being Escort and Protection of Shipping (EPOS) for interstellar expeditionary forces, carrier battle groups, underway replenishment groups and merchant convoys. The Artemis class can also conduct independent operations, such as counterdrug surveillance, planetary interdiction or deep space search and rescue missions, and is capable of sustaining itself, with a mix of both anti-fighter and capital weapons. More of a focus on transport capabilities than just firepower has given these ships a combat capability far beyond the class program expectations of the mid-2260s, and has made the ships an integral and valued asset.

The main weapon system of the FF77 are the twin 800 MeV Particle Beam cannons mounted parallel to the ship's hull. These weapons are capable of disabling enemy shipping at ranges up to 1000km, and are of great use when attempting to capture pirate and smuggler vessels. Four ASAT-100 Predator missile launchers, two 30mm Rail Cannon turrets and two 40 MW Free Electron Laser turrets provide offensive capability against close range threats, while twin ASAT-120 Balmung launchers allow the FF77 to engage and destroy hostile targets at ranges up to 1000km.

General Characteristics

Primary Function:	Frigate
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-12 F-Drive
Length:	352 metres
Height:	60 metres
Beam:	42 metres
Max Velocity	
Realspace:	1.5g
Interstellar:	0.47LY/day (EST)
Max Payload:	2,000 tons
Cargo Configurations:	ICM CSAR: 1x platoon of marines, 2x Valkyrie class dropships. Troop carrier: cryopods for 350 passengers.
Crew:	7
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x 800 MeV Particle Beam cannons 4x ASAT-100 Predator launchers; 2x ASAT-120 Balmung launchers; 2x 30mm Rail Cannon turrets; 2x 40MW Free Electron Laser turrets; 10x STGBMs.

Game Stats

Velocity: Cruise	05
: Full Thrust	08
Manoeuvre:	-8 (-16%)
Autopilot:	70%
Battle Computer:	3
Initiative Modifier:	-5
Stealth:	2
ECM:	3
Fire Control:	5
Armor Value:	45

Long Range Commercial Freight Runner:

The LRC Runner's design was rumoured to be the last EnerTek put out before they went under in 2246. The evidence originated from the similarity in the basic design from this craft and the much larger M-1 Starfreighter. Both have similar guidance, layout and control systems but the M-1 is roughly 10 times larger.

The LRCFR is actually one of the smallest freighters currently in operation. The basic design has proved popular and versatile with owners, with over 600 being produced before production halted. The LRCF Runner is a fast, light freighter similar to the short range Hauler. The LRCF became an instant hit with pirates and smugglers, which liked the amazingly versatility and manoeuvrability of the freighter.

The LRCF also sports weapons pods although these are optional, and prohibited in most ports. The manoeuvrability came from the two vectored Lockheed TF-100 fusion drives on modular movement racks. These engines allowed the ship to enter an atmosphere with ease and manoeuvre better than any other ship of its size. The TF-100s are independent on their modular "arms" with their own separate fuel source. Computer systems are antiquated and offer little in the form of automation. It can go in a straight line and plot around gravity fluxes, but that the automation stops there without a dedicated, trained pilot Runners are a serious liability.

The LRCFR's cargo is contained all on a single double height deck, which can open up via two large cargo doors, one in the floor one in the port side. Some military forces have employed it as a makeshift design to deploy armour and troops to the surface of a planet. Since it can also carry a light armament, the Runner has also been seen as a support military craft.



General Characteristics

Primary Function:	Freighter
Contractor:	EnerTek Interstellar
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Transtech-15
Length:	38 metres
Height:	9.6 metres
Beam:	24 metres
Max Velocity	
Realspace:	2g
Interstellar:	0.47LY/day (EST)
Max Payload:	1000 tons
Cargo Configurations:	1000 tons in cargo bay
Crew:	4
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	10,000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	06
: Full Thrust	10
Manoeuvre:	-5 (-10%)
Autopilot:	40%
Battle Computer:	1
Initiative Modifier:	-1
Stealth:	1
ECM:	1
Fire Control:	1
Armor Value:	25

Nebula Class Star Liner:

The Federated Boeing Interstellar Nebula class star liner offers passengers the latest in shipbuilding technology, able to carry up to 2,600 civilian passengers in comfort on long interstellar voyages.

In addition to the latest in cryosleep technology being installed, she also provides her passengers some of the most luxurious services and accommodations available. To keep those passengers who prefer to stay awake during the voyage occupied, the Nebula is equipped with a wide range of facilities, including theatres, restaurants, gymnasiums, gardens and retail outlets. To help passengers stay in contact with business or friends at home, she was equipped with a high-gain FTL transmitter and receiver staffed 24 hours a day. The facilities in the first class staterooms are unmatched and even rival many of the finest planetside accommodations. The quality and variety of food on board is exquisite and the level of service superb.

Accommodations for second class and steerage passengers, while nowhere near the luxury of first class, are nonetheless superior to many of the top accommodations found on other ships.

General Characteristics

Primary Function:	Interstellar passenger liner
Contractor:	Federated Boeing Interstellar
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-22A
Length:	300 metres
Height:	40.6 metres
Beam:	60 metres
Max Velocity	
Realspace:	0.9g
Interstellar:	0.47LY/day (EST)
Max Payload:	1000 tons
Cargo Configurations:	1000 tons in cargo bay
Crew:	4
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	10,000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	02
: Full Thrust	04
Manoeuvre:	-15 (-30%)
Autopilot:	60%
Battle Computer:	0
Initiative Modifier:	-14
Stealth:	0
ECM:	0
Fire Control:	0
Armor Value:	25

PV18 Pathfinder Class:

The Pathfinder class of starships were designed specifically for deep space military operations, such as mapping dangerous areas of space beyond the Outer Rim.

With the capability to operate independently far from base for prolonged periods the Pathfinder ships gather astrocartographical data which provides much of the military's information on the areas of beyond colonised space. Data collected by the ships extensive sensor arrays helps to improve technology in deep space warfare and enemy ship detection.

The Pathfinder class tips the scales at 15,000 metric tons, measuring 140 meters from bow to stern.

Lightly armed, the PV18's main weapons systems consist of two ASAT-100 Predator launchers, with two 40 MW Free Electron Laser turrets and twin railguns in dorsal and ventral turrets for close combat and antimissile defence.

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General Characteristics

Primary Function:	Military Scout
Contractor:	Consolidated Aerospace
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-12 F-Drive
Length:	140 metres
Height:	22 metres
Beam:	36 metres
Max Velocity	
Realspace:	1.5g
Interstellar:	0.47LY/day (EST)
Max Payload:	250 tons
Cargo Configurations:	Unknown
Crew:	6
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-100 launchers; 2x 30mm Rail Cannon turrets; 2x 40MW Free Electron Laser turrets.

Game Stats

Velocity: Cruise	06
: Full Thrust	08
Manoeuvre:	-6 (-12%)
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	0
Stealth:	3
ECM:	3
Fire Control:	4
Armor Value:	30

Stahlhammer CCM-2116 Freighter:

An older non-modular design starship, now somewhat out of date and out of fashion.

Although nearing the end of there operational lives the Stahlhammer series of starships has proven to be a popular and versatile design. Originally manufactured by Rheinmettal in Earth orbit a number were manufactured under colonial licence. In total 355 Stahlhammers were manufactured over a 50 year period, an estimated 200 are still in service a tribute to the designs robustness.

Stahlhammers have a single combined slab like hull and cargo section with a separate drive pod. The separate drive pod was originally intended to separate the living quarters from the highly dangerous fusion torus but over the years this design has allowed for rapid and easy drive modifications.

The ship is built along the classic 1-8-4 lines on 4 decks, crew living quarters are found forward of the first bulkhead, the rest of the main hull is dedicated to the cargo section with a small engineering section at the rear of the main hull. Behind the main hull is the drive section.

Stahlhammer's have a minimum civilian sensor package barely sufficient for insystem navigation and routine faster than light travel. Many operators upgrade the sensor package as a matter of urgency.



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The ships are tough, although thin skinned, they are ruggedly compartmentalised and robust and easily modified/uprated.

General Characteristics

Primary Function:	Freighter
Contractor:	Rheinmettal
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-4 F-Drive
Length:	130 metres
Height:	28 metres
Beam:	42 metres
Max Velocity	
Realspace:	1.2g
Interstellar:	0.47LY/day (EST)
Max Payload:	1,000 tons
Cargo Configurations:	Unknown
Crew:	4
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-100 launchers; 2x 30mm Rail Cannon turrets; 2x 40MW Free Electron Laser turrets

Game Stats

Velocity: Cruise	03
: Full Thrust	06
Manoeuvre:	-6 (-12%)
Autopilot:	40%
Battle Computer:	1
Initiative Modifier:	-2
Stealth:	1
ECM:	1
Fire Control:	1
Armor Value:	30

PLATFORMS

Utility Platform – Bay Class

The McConnell Bay Class Utility Platform is a 20,000-ton industrial platform designed for customization by the purchaser (typically by a third party engineering or aerospace company). Once fitted out, the role of the platform cannot be changed. It is fitted with a power source, docking clamps for loading and resupply and basic crew facilities for orbital work. The platform is not intended to be manned (with the exception of the Pelican Bay space station type, which will usually not leave its assigned location). Using a 20,000-ton standard hull, the Bay Class mounts a Nortlinghouse T67 1 Gigawatt fusion reactor that powers all on-board systems. Fuel tankage of 30-tons supplies the reactor for 12 months. No drives are fitted. The ancillary systems include a 20-ton platform control centre (with integral Hosaka QuadMax level-1 mainframe), twenty staterooms, a briefing room, repair robots, a 48-ton cargo deck and a 32-ton workshop and spares warehouse. Two 100-ton docking clamps are fitted to allow large vessels to offload or on-load cargos pertinent to the role of the platform.

The platform is generally unmanned but it can sustain a team of up to twenty technical personnel to occupy the platform for a week or two while starting up or shutting down operations. The cost of the unmodified Bay Class platform is E\$2,106M. The following Bay Class platforms give some idea of the versatility of the vessel:

- **ECS Table Bay (Bulk Carrier)** – This platform is used to haul 18,000 tons of ore across hyperspace. It includes 1500 tons of bulk discharge conveyors. Refit cost: E\$30.8M. **USCS Guantanamo Bay (Container Carrier)** – This platform is used to haul 18,000 tons of containers (exactly 6000 3-ton ICO containers) across hyperspace. It includes 1500 tons of container lifts, cranes and transport tracks. Refit cost: E\$41M.

- USCS Pelican Bay (Space Station) – This platform has been extensively remodelled as an orbital space station. It includes a 2400-ton cargo hold, a 2000-ton shuttle hanger, 6000-tons of fuel for visiting ships, 800 tons of workshops, a basic civilian sensor suite, four control centers, 200 staterooms for crew, 600 staterooms for visitors, 4000-tons of service modules (shops, amenities, passenger terminal, restaurants, etc.) and ten additional docking clamps for ships up to 200,000-tons in size. Refit cost: E\$1870M.
- USCS San Francisco Bay (Fuel Station) - This platform is used to haul 19,000 tons of liquid hydrogen across hyperspace, or to remain in orbit as a permanent fuelling station. It includes 190 tons of liquid transfer manifolds and 120 tons of fuel processors which monitor and refine batches of fuel (up to 2400 tons per day). Refit cost: E\$37.2M.

Mining Platform – ECS Thuringia 116015

The UPM-116015 Reiner-Gama Thuringia is a high-capacity mining platform designed for medium-duration mining projects; it requires towing into position and can make a single controlled descent and a single ascent from any world of Size 0-2. Using a 100,000-ton standard hull, the Thuringia mounts an Erebus Terradyne 2020- XC-23 1 Gigawatt Fusion Reactor and a cluster of Tharsis Type 16C 1-G reaction drives (capable of vectored thrust for planetary landings) used purely for landing and take-off.

The reaction drive provides an acceleration of 1G (10 m/s²). Fuel tankage comprising 400 tons of liquid hydrogen is used for a single deorbit burn and, when the platform has completed its mission, a single lift-off and ascent to orbit. Further tankage of 15,000 tons supplies the powerplant for 120 months. Adjacent to the central control room is a level-10 Okuda Generation computer mainframe and a standard civilian sensor package. A second control center, called the mining operations center (MOC), is also installed. There are 60 staterooms and Stack-Rack™ accommodation for 1,600 miners and technical personnel as well as two briefing rooms, 12 laboratories and a suite of 18 offices. A pair of detention cells is fitted.

The Thuringia has twelve landing gear struts, each with an integral cargo lift (individual capacity 3 tons) and is equipped with a 100-ton hospital with 20 beds. Fuel processors are able to create up to 1500 tons of liquid hydrogen per day if required. The platform is fully equipped for extended mining operations and includes a 9,500-ton smelting bay, 4,000 tons of ore handling equipment, processor bays massing 12,000 tons in total and 10 mining drone units. There are 500 tons of shops and bars for the off-duty personnel, a 1000-ton hydroponics bay and a 1000-ton cargo deck. An ore storage bay masses 50,000 tons, half the capacity of the platform. Carried craft include a single 90-ton Halo supply shuttle, 20 8-ton Seonwu Firefox Tractors, 10 Chevrolet MM5 Bucket Loaders, 20 EH1800 dump trucks, 20 Dynamic 7100 mobile mining lasers and a further 20 GoMo QuadTracks, all carried within a 920-ton garage.

The platform requires a crew of 1,602: commanding officer and an executive officer (who are responsible for the platform as a whole), a pilot (who serves as the chief shuttle pilot once the platform is landed), four communication operators, a chief engineer, three assistant engineers, four doctors, two medical technicians and nine nurses, two shuttle pilots, 10 geologists, 10 senior admin staff, a mining operations manager and an assistant manager (all of whom have stateroom accommodation). Living in the Stack-Racks are 10 junior admin staff, 20 shipping and cargo handlers, 40 leisure and retail workers, 20 catering, laundry and cleaning staff, 62 technicians and 1,400 mining personnel (including drivers and equipment operators). Visitors to the platform may bunk up in the 48 spare racks available, or the 10 staterooms allocated to Company visitors or extra staff. The Thuringia costs E\$58,780M.



Refinery Platform – USCS Trinity 116143

The UPR-116143 Weyland-Yutani Trinity is a high-capacity petroleum production refinery platform that requires towing from star system to star system. It cannot land on any world surface. The Trinity platform holds a 60,000-ton refinery and tankage for up to 469,000- tons of crude oil that can be refined and separated into 469,000-tons-worth of holding tanks. The platform can process crude oil as it travels through hyperspace. No crew is carried on board, although there is a suite of accommodations and various control stations that can be used by technical personnel that will board the platform to supervise the start of operations, and the shutting down of the refinery once it arrives at its destination.

Using a 1,000,000-ton standard hull, the Trinity mounts a Nortinghouse T67 1 Gigawatt fusion reactor that powers the refinery and any ancillary systems. Fuel tankage of 900-tons supplies the reactor for 12 months. No drives are fitted.

The ancillary systems include a 20-ton refinery control centre (with integral Hosaka QuadMax level-1 mainframe), ten staterooms, a briefing room, a fuel laboratory, repair robots, a 32-ton workshop and spares warehouse. Two 100-ton docking clamps with integral liquid manifold transfer systems are fitted to allow petroleum carriers to offload or on-load petroleum fuels.

The refinery platform is unmanned, but requires a team of up to ten technical personnel to occupy the platform for a week or two while starting up or shutting down refinery operations. The Trinity refinery costs E\$102,882M.

AUTONOMOUS COMBAT VEHICLES

ACS239 Hugin Autonomous Combat Vehicle (ACV):

The ACS-239 Hugin is the basic general purpose Autonomous Combat Vehicle used to equip most UEAF warships. The Hugin is a compact ovoid vehicle powered by a high efficiency MHD turbine. This turbine provides an ideal compromise between, cost, emission control and power generation. The L.Hyd fuel is stored between the skin of the double hull and helps to mask emissions and protect the delicate electronics.

The heart of the ACV is an Artificial Life Inc CSM204 AI linked to a Quark Sensors Detection Package. Hugin's are designed to extend the sensor range of the parent vessel communicating via UV communications laser. Hugin's are armed for self defence purposes with 4 ASAT missiles. Hugins may also be used as an offensive weapon against capital ships. It is equipped with a 150kg M786 directional warhead, capable of propelling 148 high density ceramic penetrators at hypersonic speeds. The warhead is deployed and the ACV manoeuvres away before the warhead undertakes final targeting corrections and detonates. The projectiles are capable of producing a hard kill against most warships at a range of 100km.

General Characteristics

Primary Function:	Remote Picket Drone
Contractor:	Consolidated Aerospace
Power Plant:	MHD
Propulsion	
Orbital:	Fusion rocket
Length:	10.69 metres
Height:	4.2 metres
Wingspan:	
Max Velocity	
Orbital:	1.3g
Flight Ceiling:	Trans-atmospheric
Max Payload:	500 tons
Cargo Configurations:	N/A.
Crew:	0
Sensors	
Space: Passive	750km
Space: Active	100km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	4x XIM28A, 1x M786 Directional fused flechette warhead

Game Stats

Velocity: Cruise	08
: Full Thrust	12
Manoeuvre:	0
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	+4
Stealth:	2
ECM:	2
Fire Control:	2
Armor Value:	10

ACS-242 Munin Recon Drone:

The ACS-242 is the primary UEAF recon drone. Like the Hugin it is a compact ovoid vehicle powered by a high efficiency MHD turbine. This turbine provides an ideal compromise between, cost, emission control and power generation. The L.Hyd fuel is stored between the skin of the double hull and helps to mask emissions and protect the delicate electronics. The heart of the ACV is an Artificial Life Inc CSM204 AI linked to a Quark Sensors Detection Package. The similar systems package was a deliberate attempt to improve the logistics of transporting these 'disposable' system. The Munin drones function is to extend the eyes and ears of the parent vessel, communicating tactical information back via a tight beam laser communications system. The extreme stealth capabilities and low power out put makes it virtually undetectable, greatly increasing in loiter time in a combat environment.

General Characteristics

Primary Function:	Recon drone
Contractor:	Consolidated Aerospace
Power Plant:	MHD
Propulsion	
Orbital:	Fusion rocket
Length:	8.3 metres
Height:	3.5 metres
Wingspan:	
Max Velocity	
Orbital:	1.2g
Flight Ceiling:	
Max Payload:	500 kg
Cargo Configurations:	N/A.
Crew:	0
Sensors	
Space: Passive	750km
Space: Active	100km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	None.

Game Stats

Velocity: Cruise	08
: Full Thrust	24
Manoeuvre:	8
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	+6
Stealth:	4
ECM:	2
Fire Control:	5
Armor Value:	10

ACS-449 Mjolnir Autonomous Combat Vehicle:

The ACS-449 Mjolnir is the primary offence ordnance carried by UEAF vessels. The ACS449 uses common components with the ACS239 and 242's greatly simplifying field logistics. Whilst the primary power supply is provided by an MHD turbine it is also equipped with a high impulse/rapid start fusion generator. The fusion generator is generally kept in a cold state to minimise its emission characteristics.

The fusion generator only becomes hot during the Mjolnir terminal phase when it is used to power the high output fusion rocket which is capable of accelerating it at 100+G. The core of the ACS-449 is a high density ceramic composite penetrator, surrounded by a magnesium/caesium alloy jacket. This jacket is designed to ignite on impact greatly increasing its damage potential.

General Characteristics

Primary Function:	Impact ACV
Contractor:	Consolidated Aerospace
Power Plant:	MHD/Fusion
Propulsion	
Orbital:	Fusion rocket
Length:	8.3 metres

Height:	3.5 metres
Wingspan:	
Max Velocity	
Orbital:	1.2g/100g
Flight Ceiling:	
Max Payload:	500 tons
Cargo Configurations:	N/A.
Crew:	0
Sensors	
Space: Passive	750km
Space: Active	100km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	4x XIM28A, 1x M786 Directional fused flechette warhead
Game Stats	
Velocity: Cruise	08
: Full Thrust	12
Manoeuvre:	0
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	+4
Stealth:	2
ECM:	2
Fire Control:	2
Armor Value:	10

CONESTOGA CLASS LIGHT ASSAULT FRIGATE

Small for a capital ship, highly manoeuvrable and lightly armed, the Conestoga class frigate was designed to perform deep space operations such as anti-pirate operations or convoy escort with minimal support assets. Only 4 years old, built by contract by WolfWeisner-Krupp, the Conestoga is the first UEAF spacecraft built by a corporation other than the mighty Consolidated Aerospace Mars or one of its subsidiaries.

The Conestoga class tips the scales at 14,000 metric tons, measuring 232 meters from bow to stern. Her asymmetric configuration allows maximum cargo capacity within the confines of a compact, heavily armoured hull. The vessel's structural framework is built around its primary power unit.



Power

Primary power is provided by a WWK-44 fusion reactor that can generate a peak output of 2.84 Terawatts. The fusion process is fuelled by powdered lithium hydride (LiH). Fuel is consumed at .25 mg per second per litre. Auxiliary power is provided by a pair of Continental Electric AS-4B/AV5 magnetohydrodynamic turbines, each unit capable of generating 15 to 30 megawatts.

Propulsion

All propulsion units are located aft of the ship's main reactor. All Castenoga class friagtes employ a dual drive method for interstellar and interplanetary movement. To manoeuvre in real space, it is equipped with a Foscolo IV Reactionless Displacement Drive that derives power from the main reactor. When interstellar travel is necessary, the ship employs a Nogama 12 F-Drive. The normal cruising speed sustainable by these units is 0.52 light years per Earth day (approximately 1 parsec per week).

Hull/Spaceframe

Spaceframe composition consists of bonded alloy and composite beams. These materials provide enough strength for massive acceleration while remaining flexible enough to withstand atmospheric re-entry. Hull armour consists of one armoured skin, heavier than that on civilian transports. The armour is composed of laminated insulators, micrometeorite shielding, composite material, and aerogel. Protection against projectile weapons is limited, as with all spacecraft, but the aerogel is capable of dissipating radiation from lasers and particle beams. The hull is also covered with radar absorbent material.

The engines vents are provided with infrared suppression/ dispersion. The hull coating is laser absorbent to reduce lidar detection. The ship is coloured in a dark charcoal scheme to reduce visibility.

The Sulaco's hull design incorporates shaping techniques that reduce radar cross-section to reduce detectability and likelihood of being targeted by enemy weapons and sensors.

The hangar bay usually carried two Valkyrie class dropships, though can only launch/land one at a time, as the ship only has one droplock.

Life Support

Cryogenic crew capsules are provided for use during the stress of F-Space travel. While in cryo-sleep, the computers maintain the crew's body functions at enormously slowed rates, waking them upon arriving on station.

Sufficient capsules are provided for up to 30 crew, marines, and passengers, but there are provisions for troop transport configurations of up to 150 capsules in the cargo bay. Artificial gravity is provided by field generators parallel to the main axis of the ship.

Crew

To reduce crew workload, and increase efficiency and safety, the Sulaco class can operate as an almost completely automated troop transport. In this mission profile, it requires just one android Executive Officer to perform basic navigation duties such as orbital insertion. During combat missions, the crew compliment increases to 12 or more:

STANDARD CREW COMPLIMENT:

- Captain
- Executive Officer / Pilot
- Warrant Officer / Navigator
- Communications Officer
- Weapons Officer
- 1x Weapons crew
- Deck Officer
- 2x Deck crew
- Medical Officer
- Technical Officer
- 1x Technical crew



Computer

The Castenoga class is equipped with a 28 Terabyte, carbon-60 based core mainframe, running a Military Artificial Intelligence (MAI) construct. In effect, the ship could pilot itself and fight a space battle even if the crew were all dead or in cryosleep. However, at any time, combat or navigational decisions made by the ship can be overridden by the commanding officer. Backup is provided by an 8 terabyte mainframe and local terminals dispersed throughout the ship.

Damage Control

Most damage control is automated by the mainframe. If the reactor suffers severe damage, the entire assembly can be jettisoned before an explosion occurs. If the vehicle is damaged to the point it becomes untenable, emergency evac is prompted by the ranking officer or automated systems. The Castenoga class carries 10 type 337 emergency escape vehicles, each capable of holding 10x cryosleep capsules or 25 crew-members. If the crew is in cryosleep, their capsules

will be loaded by the automatic systems. The ship may also be scuttled by the ranking officer. Self-destruct protocols are initiated manually, causing the reactor to go supercritical fifteen minutes after initiation.

Sensors/Communications

The main sensor array is mounted on the nose of the ship. thirty-metre pylons project from this area, ensuring that the ship's bulk causes no interference. The passive array consists of: two optical telescopes, two infrared telescopes, and a 30m planar-array radio telescope with a 5m backup unit. Active sensing is provided by three radar domes that employ centimetre wave radar for navigation and long range scans. Five more phased arrays along the hull provide target acquisition/tracking information for the ship's weapons. The main comm array is just forward of the drive units, consisting of a 44m ventral antenna array used to broadcast during FTL travel, and a secondary 10m antenna for insystem communication. A variety of other relays and receivers exist for securing, and intercepting trans-missions.

Armament

The main space-to-space punch of the Hermes is provided by the ASAT-120 Balmung and ASAT-100 Predator missile systems, each mounted in twin forward-firing tube launchers.

For point defence against incoming missiles and aerospace craft, and for close-in combat with other capital ships, the Hermes mounts 4x 30mm Rail Cannon turrets and 2x 80MW IR Laser turrets, each arranged in parallel double batteries.

Space-to-surface capability is provided by a magazine below the cargo bay and forward of the dropship hangar. 10 free-fall, self-guiding STGBM re-entry vehicles are carried. The STGBM carries a standard Space-to-Ground tactical nuclear warhead.

The armament carried by the Hermes class enhances her flexibility, allowing her to function as a multi-role platform independent of a fleet or taskforce. She can carry a sizable Marine complement while defending herself from attack, or provide orbital bombardment in support of a Marine landing or planetary action.

Shipboard Locations:

All shipboard locations accessible by the crew are positioned forward of the ship's main reactor, within a 100m block of the hull. The Sulaco has two main decks. See the deck plans for details.

UPPER DECK:

1. Bridge:

The bridge of the Sulaco is buried deep within the ship, to protect it against damage during combat. There are positions for the captain, pilot, navigator, communications officer and weapons crew. Large hi-resolution screens display a mixture of graphics, tactical data and real-time exterior views via a series of cameras mounted on the hull.

2. CPU:

Enclosed in a locked armoured room, the CPU on the Sulaco frigate is accessible only by command staff, typically the Captain and the Executive Officer. During mission time, the Commanding Officer of any troops onboard will also be given security clearance.

3. Upper Causeway:

A 3m wide corridor, with emergency bulkhead doors at 20m intervals, the upper causeway runs the length of the upper deck.

4. Ward Room:

Used by command staff as a meeting / briefing room. Usually kept locked, only command staff are issued with the security clearance to enter this room.

5. Theatre / Briefing Room:

A forty person capacity briefing room, with large protection screen, lectern and angled seating area.

6. Personal Communications Booths:

Four private booths used by the crew for personal communication with family and friends. Only accessible at discretion of the command staff.

7. Crew Quarters:

Living quarters for enlisted men and women during missions involving substantial time onboard ship out of cryosleep. Each room is designed to house two crew-members, but can be fitted to house four if necessary.

8. NCO Quarters:

Living quarters for non-commissioned officers during missions involving substantial time onboard ship out of cryosleep. Each room is designed to house two crew-members, but can be fitted to house four if necessary.

9. CO Quarters:

Living quarters for officers during missions involving substantial time onboard ship out of cryosleep. Designed to house a single crewmember, but can be fitted to house up to four if necessary.

10. Kitchen:

Food preparation is done here. There is space for crew-members to cook, but most meals are MREs prepared by the installed Autochef.

11. Galley:

The crew usually eat their meals here. Enough room to seat up to 40 at a time.

12. Medbay:

An infirmary equipped to handle most medical emergencies. The ship's computer has access to extensive medical reference and diagnostic software to aid in the treatment of patients. Critical patients are usually stabilised then put into cryosleep until they can be transported to a United Earth Armed Forces medical facility.

13. Lift:

3m² lift that provides access to the upper and lower decks. In case of power failure, there is also a stairwell here.

14. Lockers:

This area is usually filled with metal lockers, which contain the clothing and personal effects of crew and passengers during cryosleep.

15. Cryosleep Vault:

Contains 30 cryosleep pods, in three rows of ten. In the case of an emergency evac order, those pods currently in use are automatically loaded via the ceiling into emergency escape vehicles.

16. Shower Block:

Partitioned for male and female use.

17. Gym:

Includes weights and exercise equipment.

18. PX

Automated store containing 'luxury' items like alcohol, cigarettes and entertainment (films, books etc).

19. Laundry:

Even the toughest grunt has to wash his/her smalls!

20. VR Shooting Range:

Five stalls equipped with pistol and assault rifle replicas that fire low-power lasers at virtual reality targets at the other end of the range.

21. Store:

Perishable goods are stored in here.

LOWER DECK:

22. Avionics:

Access to avionics circuitry.

23. Munitions Bay:

Armoured chamber with access restricted to NCOs and above. Heavy munitions such as aerospace craft ordnance are stored here.

24. Armoury:

Small-arms, ammunition and body armour are deposited in this reinforced chamber when they are not in use. Access is usually restricted to NCOs and above. The weapons manifest is entirely dependant upon the ship's

current mission profile. As standard, there are usually enough small arms to equip the standard crew compliment of twelve.

25. Ready Room #1:

This room contains an emergency weapons locker, spacesuits, medical supplies, rescue pods etc.

26. Cargo Bay:

The Castenoga class frigate can carry up to 1000 tons of cargo in this large chamber. Cargo is loaded and unloaded via the 20m² cargo lock doors in the starboard side of the ship's hull. The cargo bay has an overhead crane assembly and magnetic cargo grips at regular intervals on the floor, to hold cargo containers in place during space travel. There are usually a couple of power loaders stowed either in here or in the vehicle bay (29).

27. Main Airlock:

Used by personnel for boarding and disembarking when docked at space stations. The airlock usually contains emergency equipment like rescue pods and medkits.

28. Hangar Bay:

The Sulaco hanger bay is large enough to hold two Valkyrie class dropships, though it only has one droplock and one landing lock, so cannot launch and receive more than one craft simultaneously.

Aerospace craft are manoeuvred into launch position over the droplock by an overhead hydraulic crane assembly.

29. Vehicle Bay:

Large enough to house a standard APC/ATV sized vehicle. This chamber also contains a maintenance garage with an extensive array of electronics and mechanical tools for repair work to vehicles and aerospace craft.

30. Ready Room #2:

This room contains an emergency weapons locker, spacesuits, medical supplies, rescue pods etc.

31. Lift/Personnel Airlock Access:

This lift gives access to both decks, plus the ventral and dorsal personnel airlocks.

32. Brig:

Three cells, each fitted with tungsten-titanium bars and electronic locks.

33. Gravitics:

Access to ships gravitic field generator machinery for maintenance and repairs.

34. Batteries:

Each of these chambers provides access to the one of the two Continental Electric AS4B/AV5 magneto-hydrodynamic turbines that provide emergency power should the reactor fail. This is also where power cells are charged.

35. Recycler:

All onboard waste is recycled where possible. This includes all liquid and solid human waste. The WWK Recyclotron 4000 can sustain a closed system for up to a decade without needing replacement filtration modules.

36. Life Support:

Access to the atmospheric scrubbers and recyclers for maintenance/repair, as well as associated coolant supplies are found here

37. Engineering

Access to Interplanetary and Interstellar drives, and to the reactor core, for maintenance and/or repair.

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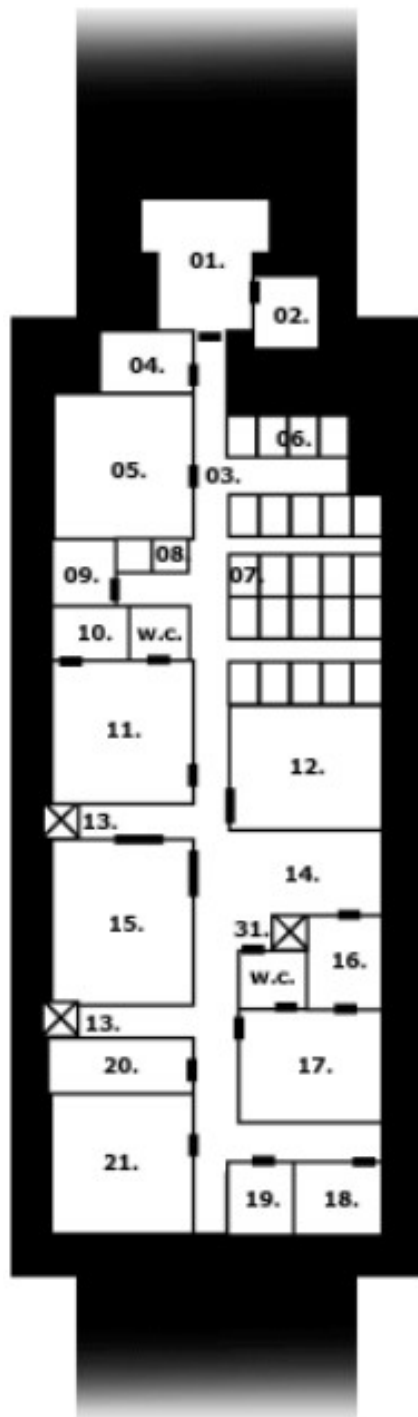
General Characteristics

Primary Function:	frigate
Contractor:	Wolf-Weisner-Krupp
Power Plant:	Fusion
Propulsion	
Realspace:	Reactionless Displacement
F-Space:	Nogama-12 F-Drive
Length:	232 metres
Height:	45 metres
Beam:	36 metres
Speed	
Realspace:	3.2AU/day (EST)
F-Space:	0.47LY/day (EST)
Max Payload:	1,000 tons
Cargo Configurations:	ICM CSAR: 1x platoon of marines, 2x Valkyrie class dropships. Troop carrier: cryopods for 150 passengers.
Crew:	7
Sensors	
Space: Passive	2000km
Space: Active	1000km
Perimeter Alert:	20,000km
Comm Range:	3000km
Standard Weapon Systems:	2x ASAT-100 Predator launchers; 2x ASAT-120 Balmung launchers; 4x 30mm Rail Cannon turrets; 2x 80mW Infrared Laser turrets. 10x STGBMs

Game Stats

Velocity: Cruise	06
: Full Thrust	09
Manoeuvre:	-5
Autopilot:	70%
Battle Computer:	2
Initiative Modifier:	-3
Stealth:	2
ECM:	2
Fire Control:	5
Armor Value:	35

UPPER DECK

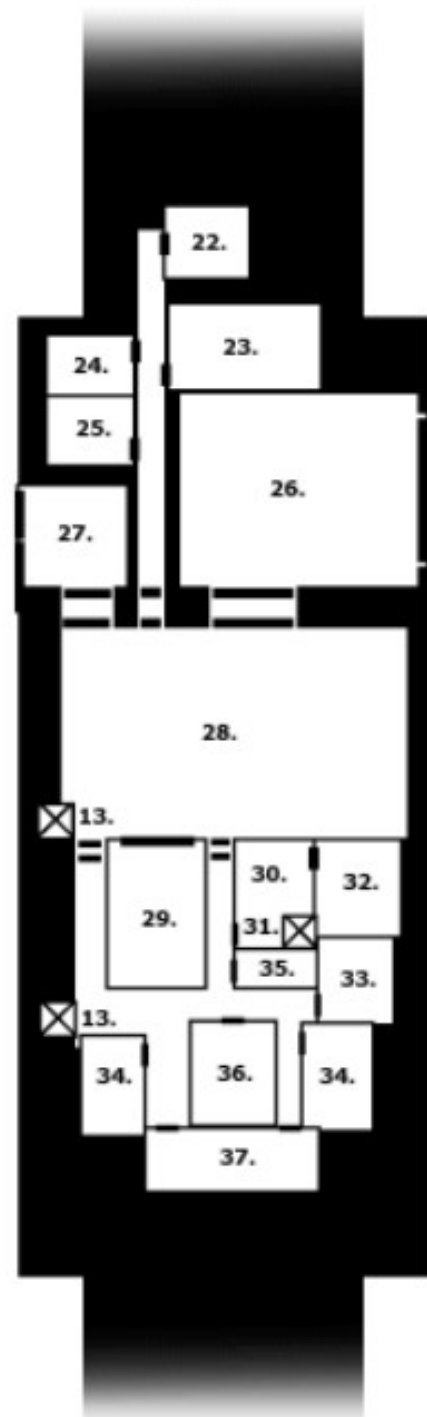


100 meters

0 meter

LOWER DECK

FTL COMMUNICATIONS
ARRAY



REALSPACE DRIVE

STAR DRIVE AND REACTOR CORE

Starports

In some respects a StarPort is similar to a 21st century international airport or shipping port.

The Field

The landing field is an extensive open area which is fenced for security and for suppression of smuggling (with appropriate patrols around the perimeter). Class 'D' fields are rarely more than a cleared region, but class 'A' to 'C' fields are hard-surfaced with ferroconcrete and advanced 'concrete' materials. All repair facilities and shipyards are located in the field area. One may travel freely anywhere on the field without a visa or landing pass from the local authorities, but protective garments will be required in the landing areas.

The Terminal

The terminal itself contains the usual customs and immigration facilities, booking agencies, restaurants, 'duty-free' shops, and over-night accommodations for passengers awaiting flights. In order to enter or leave (to and from the Field) one must pass through a customs and immigrations check, and weapon sensors will often be used to regulate weapons being carried. Note that all restricted and prohibited weapons will be held at the field gate until personnel return to their ships. Ground transport with Rad shields is provided between ships and the terminal.

The Port Region

Around the field and terminal will be a settlement or perhaps a city which corresponds closely to most ports. In this region crews can arrange for various forms of "recreation" in the 'red light district,' purchase supplies and equipment for the vessel, book cargoes from local shippers, etc. It is also the jumping off point for crewmen and passengers proceeding elsewhere on the planet, and vehicles, airline tickets, etc., can be obtained. On some planets, especially those with Dictatorships or Religious Dictatorships, the port region is regarded as the limit beyond which visitors cannot go without special permission, visas, etc.

Orbiting StarPorts

Ships over 50,000t displacement are typically unable to land on planetary surfaces. Planets with class 'A' or 'B' StarPorts will maintain orbiting space stations with repair facilities and terminal facilities corresponding to those on the ground to service such vessels. Class 'C' and 'D' StarPorts may have limited orbital facilities, but it is unlikely. Cargoes are off-loaded onto local shuttlecraft for transportation down to the planetary surface, where they are then passed through customs. Class 'D' StarPorts typically have limited shuttle capability, so large vessels may have to employ their own shuttles to transport cargo quickly to the surface and avoid delays.

SpacePort Ratings

StarPorts have already been rated for their repair and building facilities. SpacePorts with AAAA ratings are as 4 A StarPorts in capacity, etc. It may also help players to view StarPorts as conventional airports of today.

- Class 'A' StarPorts are similar to major international airports (N.Y., Chicago), with a large number of space lines offering runs within the sector and to other starsectors on a regular basis.
- Class 'B' StarPorts are equivalent to major city airports with fairly regular service within the starsector but only intermittent service to other starsectors.
- Class 'C' StarPorts are equivalent to small city airports, with somewhat spotty regional service (often by small, independent carriers) and exceedingly rare service to other starsectors.
- Class 'D' StarPorts are very small landing fields with limited repair and port facilities, offering local transportation within the starsystem and only occasional service to other star systems in the starsector.

Note that planets with AAAA or AAA, etc. may have several ports rather than one huge port.

StarPort Defences

Most StarPorts are located near or adjacent to naval StarPorts and will have their defences provided by the authorities.

Extraterritoriality of Starships

In some regions, a Starship is regarded as a piece of territory of its planet of registry, and local authorities cannot enter it without obtaining diplomatic permission from the foreign service representatives of the Starships home planet. FLEA and ColSec authorities have the right of entry whenever ships of their interstellar grouping are involved, if any suspicion of the commission of an interstellar offence exists. Violation of the Starships 'extraterritoriality' by foreign powers is often regarded as a major breach of interstellar relations and may be viewed as an act of war. Weapon control laws and other restrictions applied aboard ship are those of the planet of registry.



Trade & Commerce

A free trader or subsidised Starship with free cargo space may attempt to speculate by purchasing goods and then attempting to sell them at a profit on another planet. A week is required to arrange for the purchase and delivery of the goods to the ship.

The price of goods for purchase or resale is determined by rolling 3d6, adding or subtracting the modifiers given for Merchandising skill, and for the type of planet upon which the transactions are made. The resulting percentage indicates the purchase/resale value of the goods at a given location.

Note: minimum modified score is always -3, and the maximum is 35.

3d6	Value	3d6	Value	3d6	Value
-3	40%	10	105%	23	190%
-2	45%	11	110%	24	200%
-1	50%	12	115%	25	210%
0	55%	13	120%	26	220%
1	60%	14	125%	27	230%
2	65%	15	130%	28	240%
3	70%	16	135%	29	250%
4	75%	17	135%	30	260%
5	80%	18	145%	31	275%
6	85%	19	150%	32	300%
7	90%	20	160%	33	325%
8	95%	21	170%	34	350%
9	100%	22	180%	35	400%

Merchandising modifiers are -1 per expertise level for purchasing and +1 per expertise level for selling goods. The Cargo Officer's Merchant skills are normally applied. Population modifiers are -3 for worlds under 1 billion, -2 for worlds under 5 billion, and -1 for worlds under 10 billion, applied when attempting to sell goods.

Worlds themselves influence the purchase/selling price. The following table gives the Dice Modifications applied to the 3d6 roll for planets.

Trade Goods	Price	Unit	RI	AI	PI	RA	AA	PA
Industrial Metals	1500	t	+5	+3	+1	-1	-2	-3

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Silver	1000	kg	+3	+2	+1	+0	.1	-3
Gold	25,000	kg	+0	+0	+0	+0	+0	+0
Platinum	40,000	kg	+6	+5	+3	+0	-2	-4
Thorium	250	kg	+3	+2	+1	+0	-1	-3
Uranium	500	kg	+4	+3	+2	+0	-1	.3
Iridium	30,000	kg	+3	+2	+1	+0	-1	-2
Ununpentium	50,000	kg	+6	+4	+2	+0	-1	-3
Gem Stones	100d100	gem	+3	+2	+1	+0	-1	-3
Machine Tools	50,000	t	-4	-2	-1	+0	+2	+4
Factory Equipment	75,000	t	-4	-2	-1	+1	+3	+5
Mechanical Parts	50,000	t	-3	-1	+0	+1	+2	+4
Electronic Parts	100,000	t	-5	-3	-2	+0	+2	+5
Computer Parts	150,000	t	-6	-4	-2	+0	+2	+5
Cybernetic Parts	175,000	t	-4	-3	-1	+0	+3	+5
Petrochemicals	2500	t	+4	+3	+1	+0	-1	-2
Industrial Chain.	5000	t	+4	+3	+1	+0	-2	-4
Vehicles*	variable	item	-4	.3	-1	+1	+2	+3
Aircraft*	variable	item	-4	-3	-1	+1	+3	+4
Military Equipment*	variable	item	-4	-3	-1	+1	+2	+3
Foodstuffs	1000	t	+9	+7	+4	+0	-3	-6
Textiles	2500	t	+3	+2	+2	+0	-1	-3
Polytextiles	5000	t	-3	-2	-1	+0	+2	+3
Furs	25,000	t	+5	+4	+2	+0	-2	-5
Liquor/Wines	10,000	t	+4	+2	+0	.2	-3	-4
Luxury Goods	50,000	t	+5	+2	+0	+3	-2	-4
General Tools*	variable	tool	-3	-2	+0	+2	+2	+2
Misc. Equipment*	variable	item	-3	-2	+0	+2	+2	+2

*See equipment lists for basic prices. Use 'discount' purchases to compute the wholesale value of an item and the full retail value to compute any resale values.

Keys:

RI (Rich Industrial)

PI (Poor Industrial)

AI (Average Industrial)

RA (Rich Agricultural)

AA (Average Agricultural)

PA (Poor Agricultural)

The amount of goods that can be sold at any port of call is 10% + (1d6 x Merchant expertise of the Cargo Officer/Trading Officer handling the merchandising. Roll 1d6 for the number of days required to sell off that amount of goods.

Salvage From A Spacecraft

Salvage of derelict ships is potentially a way for PCs to enrich themselves. However, salvaging isn't easy, beginning with the fact that PCs need their own spacecraft from which to conduct operations. Assuming that's dealt with, and that any relevant space law is on the side of would-be salvagers, items might be salvaged from a derelict craft. (Remember that each month of spacecraft operation usually requires that the PCs pay a cost in fuel, feedstocks, and other spacecraft upkeep.)

There are various ways to handle spacecraft salvaging.

- **Exploration:** If PCs have never salvaged before, treat the experience like an extended exploration encounter or mini-adventure. Just getting aboard a drifting, spinning hulk of a spacecraft is a challenge, and who knows if any failsafes, defenses, or lingering issues that caused the spacecraft to become a derelict in the first place are still active? Well, the PCs can discover all that as they board and search the ship. In this case, they'll find an assortment of general equipment and armaments in appropriate sections of the ship, though it's likely that much of it will be nonfunctional, or minimally functional, if the ship went through some kind of combat, suffered a fire, or spent any appreciable time exposed to vacuum. Thus, finding working equipment and weapons is rarer. Fortunately, salvage of scrap metal and rare earth is not nothing.

- **Routine:** If the PCs find a relatively small or inconsequential ship, you can handle salvage simply by asking the PCs to attempt a salvage (unless the ship to be salvaged is brought aboard a much larger craft into a sealed hold with atmosphere).
- **Full Ship Salvage:** In addition to any other individual pieces of equipment the PCs might find aboard a derelict, they might be able to salvage an entire spacecraft for scrap (or whatever a buyer wants to do with it) if the PCs' craft is capable of acting as a tug and the derelict can be towed. In this case, the return on salvage is ten equal shares. Each share is equal to an amount of currency two steps lower than the salvaged ship's original price category. For example, if the PCs salvage a solar sail spacecraft, which is exorbitantly priced, they come away with ten shares, each share equal to an expensive amount of currency. The PCs can divide that up however they wish.

Use the Random Spacecraft Salvage Table to see what PCs find in any given chamber of the craft, if you haven't previously determined what's available.

Salvage Found On A Derelict Spacecraft

If the derelict ship was subject to vacuum, partly destroyed in combat, or damaged by some other disaster or close encounter with a space hazard, salvaged items are usually degraded, and are valued at one price category less than noted. The GM may decide an object is completely unrecoverable (worthless) or works fine.

Random Spacecraft Salvage Table

D10 In-Ship Salvage

01	Power core/fuel for drive (Expensive)
02	Computer core holding core code of a sim AI or strong AI (Expensive)
03	Cargo—parts, seeds, feedstock for 4D printers, etc. (Very expensive)
04	Food and water stores, 1d6 months (Expensive for each month)
05	Valuable information encoded in ship systems (variable)
06	GM-selected item of health care & nutrition, advanced tech rating (variable)
07	GM-selected item of utility gear, advanced tech rating (variable)
08	GM-selected item of apparel & armor, advanced tech rating (variable)
09	GM-selected robot, advanced tech rating (variable)
10	GM-selected armament, advanced tech rating (variable)



The Interstellar Colonial Marine Corps

by Wikipedia, Chris Dias, Lee Brimmicombe-Wood, John Ossoway, Andy Edwards,
Gary Cooper & Graham Raynes

"Naked force has resolved more conflicts throughout history than any other factor. The contrary opinion, that violence doesn't solve anything, is wishful thinking at its worst. People who forget that always die."

Lieutenant Jean Raszczak – Mobile Infantry

Formed as a requirement of the Colonial Act of 2140, the Interstellar Colonial Marine Corps (ICM) is a branch of the United Earth Armed Forces (UEAF) providing the projection of military force quickly and decisively across interplanetary and interstellar distances to resolve colonial disputes and keep the peace. The ICM operates as a part of the United Earth Space Command (UESC).

The ICM Corps

"Per Mare, Per Terra, Per Astrum"

The Marine motto "By Sea, By Land, By Space"

MISSION

The mission of the ICM is strictly devoted to the defence of all United Earth Federation (UEF) colonies in space. Colonial Marines are the vanguard of the UEF interstellar armed forces, responding swiftly and potently against any aggressor who should pose a threat to the security of Federation territory and civilians in space, whether it be a human aggressor, intelligent extraterrestrial force, or a "pest control" situation involving primitive alien lifeforms.

Each permanent member state of the United Earth Federation Security Council (UEFSC) is required to contribute to the manpower and funding of the ICM, in the same way that they contribute to the UEAF in general. Despite the obvious political boundaries, the ICM work together as a cohesive fighting force, sharing equipment, training, and doctrine.



HISTORICAL MISSION

Historically Marine Corps were composed of infantry serving aboard naval vessels and Marines were responsible for the security of the ship and her crew by conducting offensive and defensive combat during boarding actions, and defending the ship's officers from mutiny; to the latter end, their quarters on ship were often strategically positioned between the officers' quarters and the rest of the vessel.

CAPABILITIES

The ICM has, as a force, the unique ability to rapidly deploy a combined-arms task force to almost anywhere in the United Earth Federation within a matter of weeks. The basic structure for all deployed units integrates a planetary combat component, an aerospace component, and a logistics combat component under a common command element.

The close integration of disparate Marine units stems from an organisational culture centred around the infantry. The ICM maintains an operational and training culture dedicated to emphasising the infantry combat abilities of every Marine. All Colonial Marines receive training first and foremost as basic infantry, and thus the ICM at heart functions culturally as an infantry corps. The value of this culture has been demonstrated many times throughout history. For example, at Willis Island on the planet Ixion during the Colonial Wars, when all the Marine aerospace assets had been destroyed, the pilots continued the fight as infantry, leading supply clerks and cooks in a final defensive effort.

Planetary assault techniques have evolved into the current Operational Manoeuvre from Orbit doctrine of power projection from planetary orbit. The Marines are credited with the development of aerospace insertion doctrine and teach manoeuvre-warfare principles which emphasise low-level initiative and flexible execution. As a result, a large degree of initiative and autonomy is expected of junior Marines, particularly the NCOs, (corporals and sergeants), as compared with many other military organisations. The Marine Corps emphasizes authority and responsibility downward to a greater degree than the other military services. Flexibility of execution is implemented via an emphasis on "commander's intent" as a guiding principle for carrying out orders; specifying the end state but leaving open the method of execution.

The ICM relies on the UESC for spacelift to provide its rapid deployment capabilities. Marine Expeditionary Units (MEU) are typically stationed with UESC fleet elements. This allows the ability to function as first responders to interplanetary and interstellar incidents. In larger conflicts, the ICM often acts as a stopgap, to get into and hold an area until larger units can be mobilised. The Corps performed this role during the Colonial Wars, when Colonial Marines were the first significant combat units deployed, and who held the line until the United Earth Federation could mobilise for war.

In many ways Colonial Marines are 'special forces', undertaking short to medium duration missions including ship-to-ship and fleet boarding actions, or the establishing of the initial planethead during a planetary assault. They are also tasked with shipboard security of UEAF spacecraft.

History

ORIGINS

The Interstellar Colonial Marine Corps traces its origins back to 2074 and the formation of the Lunar Security Force (LSF). A small detachment of soldiers and security specialists assembled by the United Nations Space Administration (UNSA), the LSF were tasked with keeping the peace and mediating any disagreements at the Luna colonies in the wake of the Luna Crisis.

A decade later, the newly formed United Earth Federation ratified a treaty of United Earth Armed Forces (UEAF), a cohesive fighting force to stop these and future wars, with troops and equipment supplied by all member states, under one general command staff comprising of high-ranking officers of all nations. The outer space contingent of this force was formed around the LSF, and with the operational range of this unit expanded to include solar system wide missions, it was renamed in 2090 and became the Interplanetary Marine Corps (IP Marines).

FORMATIVE YEARS

During the late 21st and early 22nd century, IP Marines served as a convenient resource for interventions and landings to protect lives and interests and to keep the peace between rival megacorporations in the Sol Colonies.

Elements of the IP Marines were involved in over 17 separate interventions in the 50 years from their formation to the passing of the Colonial Act in 2140. It was during this period that the IP Marines adopted a phrase originally applied to the United States Marine Corps (USMC) by war correspondent Richard Harding Davis: The Marines have landed and have the situation well in hand.

The last major deployment of IP Marines was during the Tau Ceti Interdiction in 2140, when a war between rival megacorps in that star system escalated to the nuclear level. At first the fighting had been localised to a handful of contested sites, but tit for tat revenge attacks by both sides quickly caused matters to escalate out of control. Undercover support flowed in from Chinese and American factions on Earth, spreading and deepening the conflict across the system.

The UESC sanctioned the dispatch of a UEAF taskforce to the system, to protect the civilian population and to contain and stop the fighting. After 18 months of fighting, the Viking Treaty of 2140 signed at the Mars Colony, brought an end to the conflict.

Though the war was over, it had been a wakeup call for the UEF. Faced with a gradual erosion of power by the continuing interstellar colonial expansion, and the possibility that this could lead humanity to splinter into dozens of factions, the UEF moved quickly to restructure and reposition itself. The changes resulted in a piece of legislation being passed called the Colonial Act.

With the passing of the Colonial Act in 2140 the IP Marines were restructured and upscaled to become the Interstellar Colonial Marine Corps.

TITLEMAN'S REST

The first real test of the Colonial Marines was when they were ordered to lead the assault against a fortified compound on Titleman's Rest in the Ross 780 star system. The compound was the hideout of Tiberius Lee, excommanding officer of mercenary unit the Star Tigers. Lee was charged with ordering the tactical nuclear strike during the Tau Ceti War that resulted in the deaths of almost 1200 civilian colonists at Kow-Lang on the planet Anjuna. After a fierce battle lasting 10 hours, Lee and his surviving followers were arrested.

THE RUSSIAN CIVIL WAR

During the Russian Civil War in the late 22nd century, the ICM served an important role in being the first UEAF peacekeepers deployed to stop the various factions fighting.

THE SAN HELENA INTERDICTION

The 6th and 14th Marine Expeditionary Units were the lead elements in the first attempt by the UEF to crackdown on the motley assortment of prospectors, pirates, scavengers and treasure seekers congregating on the planet San Helena in the Sirius star system. Joint Task Force Sharp Edge was nominally under FLEA command, with the ICM providing the military muscle.

During the military interdiction of the system, Colonial Marines spearheaded both assaults on the domed city of Robinson in May and October 2208. Their time on San Helena courted controversy with several independent news agencies pointing the finger of blame at the ICM for the Bracknell Disaster, during which the dome of the Bracknell mining settlement was ruptured, resulting in the deaths of 112 colonists.

THE COLONIAL WARS

The ICM served an important role throughout the Colonial Wars. Partaking in the Battle of Willis Island (2258 – Mu Herculis), the Invasion of Haven (2258 – HD157881) and fighting throughout the Persei Campaign (2258-59 – Iota Persei and Theta Persei), Colonial Marines executed a succession of planetary invasions during which planetheads were established and held against often fierce rebel counterattacks, until they could be reinforced by the regular units of the UEF Expeditionary Force.

Fighting on the Rimworlds and Herculis Fronts, the Colonial War was the longest war the ICM had participated in. By the time the ceasefire was declared in 2260, 3,091 were killed in action, 11,092 were wounded, and 27 Nebula Medals were awarded.

The worse losses during the war were in the wake of the disastrous Ixion Invasion. Rebel troops surrounded, surprised and overwhelmed the overextended and outnumbered government forces. However, unlike the UEAF 2nd Army, which retreated in disarray, the 1st Marine Division regrouped and inflicted heavy casualties during their fighting withdrawal to the planethead. Now known as the Battle of Ixion, it entered Marine lore as an example of toughness and resolve.



Unit Insignia of the 71st Avenging Angels Planetary Assault Battalion, which led the invasion of Haven

POST-COLONIAL REBELLION

After the Colonial Wars the ICM resumed their expeditionary role, participating in numerous interventions, as well as longer missions including the peacekeeping operation on the planet Aricebo (2270 – 82 Eridani) and more recently leading the interdiction against separatists on the planet Paragon (2271 – 36 Ophiuchi C).

Organisation

The United Earth Space Command, led by the Chief of Space Operations (a four-star admiral who is immediately under and reports to the Secretary of the Navy), administers both the ICM and the United Earth Space Navy. The most senior Marine officer is the Commandant of the Marine Corps. The ICM is then organised into four principal subdivisions:

Headquarters Interstellar Colonial Marine Corps (HQICM), the Operating Forces, the Supporting Establishment, and the Colonial Marine Forces Reserve.

The Operating Forces are further subdivided into three categories: Marine Space Forces (MSF) assigned to unified commands, Marine Corps Security Forces guarding high-risk naval installations, and Marine Corps Security Guard detachments at ICA administrative centres.

The Supporting Establishment includes Colonial Marine Corps Combat Development Command, Colonial Marine Corps Recruit Depots, Colonial Marine Corps Logistics Command, Colonial Marine bases and aerospace stations, Recruiting Command, and the Colonial Marine Band.

RELATIONSHIP WITH OTHER SERVICES

The ICM combat capabilities overlap those of the UEAF regular army, the latter having historically viewed the Corps as encroaching on the Army's capabilities and competing for funding, missions, and renown. Being administered by the UESC, the ICM has a close relationship with the Space Navy, more so than with other branches of the UEAF. Training alongside each other is viewed as critical, as the UESC provides transport, logistical, and combat support to put Colonial Marine units into the fight.

STRUCTURE AND MAKEUP

The Colonial Act of 2140 established the ICM structure as four combat divisions and four aerospace wings, plus the support services organic to these formations. At present the ICM strength stands at 160,000 active duty and 20,000 reserve Marines. This reserve element comprising a fifth division and aerospace wing.

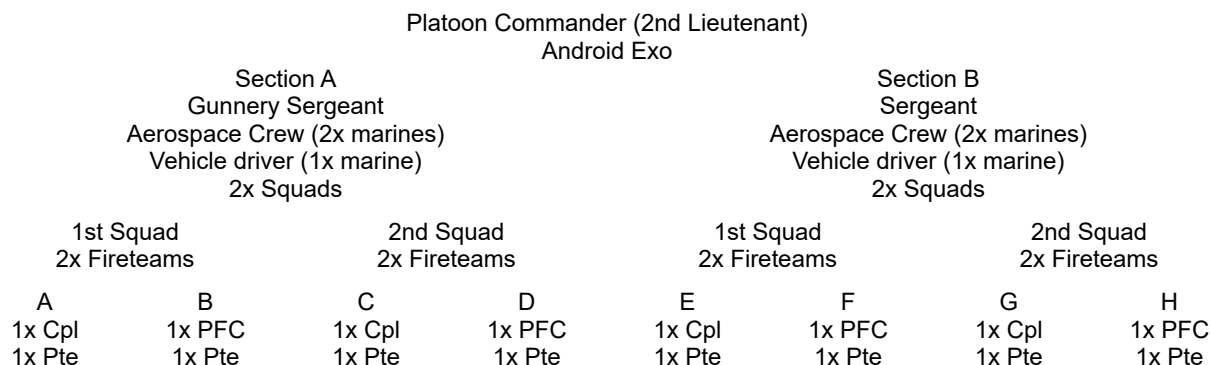
ICM Infantry

ICM doctrine stresses the need for small, autonomous infantry units capable of operating with or without higher level support on the nonlinear battlefield. Given the fluid nature of battle at the small-unit level, the rifle unit must be capable of moving great distances rapidly using its own transport, must carry its own heavy support weapons and sensors, and be able to apply great concentrations of firepower rapidly. The current organization of the marine rifle squad and platoon reflect the ultimate development of this doctrine.

The Colonial Marine Platoon

A Marine Platoon (26 Marines) has 1 platoon commander (Lieutenant), 1 android Exo. and 2 sections, A and B. Each section has its commanding sergeant, a dropship crew of 2 Marines, 1 APC driver and two squads. Each squad has two teams: Fireteam A through H. Each team has 2 Marines.

The commanding sergeant of section A is second in command (2iC.), he will replace the platoon commander if the commander is killed or incapacitated. The commanding sergeant of section B is 3iC. Each squad has a squad leader at the rank of corporal. In case all superior officers and NCOs are killed or incapacitated command will fall to the corporal with the highest fireteam letter designation (from A on top down to H).



The Colonial Marine Company

Each platoon is one of three in a Marine Company. The Company is the lowest level of command with a headquarters element, which is usually a fourth platoon commanded by a Captain. A standard colonial marine company comprises 110 marines.

The Colonial Marine Battalion

Three Companies form one Battalion. A battalion usually has a fourth headquarters company, commanded by a Major. A standard colonial marine infantry battalion typically comprises 430 marines.

The Colonial Marine Brigade

Three Battalions and one Headquarters Company in turn form one Regiment. The Marine Infantry Regiment is part of a Marine Brigade, along with other units. Two Brigades form one Marine Division.

The Colonial Marine Division

The Colonial Marine Division is the largest operational unit size of the Marine Space Force. It is essentially a balanced force of combat, support and service elements. Organised around three infantry regiments, the division is especially designed to execute the orbital assault mission, and is capable of sustained surface operations.

Basically these are the main strike forces of the UECMC. Usually, sent in numbers, the MSF provide the main punch in planetary bombardments. They send Dropships planetside in the hundreds. Most frigates carry a full payload in troops. No scientific cargo. Each Battle Fleet is led by a Major, Colonel, or Captain. A Battalion is usually led by a General.

A MSF often breaks up into its individual battle groups and sent off on smaller duties. An MSF patrols the hostile borders of Alexandria and the OA. The force includes every type of technology in the UECMC – Battlecruisers, fighters, dropships, and armour are all carried on board.

As an example of the organisational makeup of a Colonial Marine Division, the 1st Colonial Marine Division is composed of:

- Headquarters Battalion;
- 1st Colonial Marine Regiment (infantry);
- 5th Colonial Marine Regiment (infantry);
- 7th Colonial Marine Regiment (infantry);
- 11th Colonial Marine Regiment (artillery);
- 77th Planetary Assault Battalion;
- 1st Recon Battalion;
- 3rd Recon Battalion;
- 1st Combat Engineer Battalion;
- 1st Armour Battalion;
- 1st Armoured Transport Battalion;
- 1st Communications Battalion;
- 1st Battlesuit Battalion;
- 1st Aerospace Defence Battalion;
- 1st Interface Transport Group;



These units represent a combat-ready force of more than 20,000 men and women.

The Marine Space Force

To enable the UEAF to project fighting power to the frontiers of Federation controlled space and beyond, the ICM is organised into Marine Space Forces. There are four in all, listed below:

Marine Space Force, Sol:

Marine Space Force Sol is primarily based at Unity Space Station, Earth orbit, and at Fort Plato, Luna. It consists of:

- 1st Colonial Marine Division
- 1st Marine Aerospace Wing
- 1st Colonial Support Group

Marine Space Force, Centauri:

Marine Space Force Centauri is primarily based in the Alpha Centauri star system, at Fort Hadrian on the planet Centauri Prime. It consists of:

- 2nd Colonial Marine Division
- 2nd Marine Aerospace Wing
- 2nd Colonial Support Group

Marine Space Force, Eridani:

Marine Space Force Eridani is primarily based at New Damascus on the planet Eridanus in the Omicron² Eridani star system. It consists of:

- 3rd Colonial Marine Division
- 3rd Marine Aerospace Wing
- 3rd Colonial Support Group

Marine Space Force, Herculis:

Marine Space Force Sol is primarily based at Niobe in the 70 Ophiuchi star system. It consists of:

- 4th Colonial Marine Division
- 4th Marine Aerospace Wing
- 4th Colonial Support Group

MSF Sol and MSF Centauri are responsible for operations throughout the core systems; MSF Eridani operates at the edge of the core systems and into the outer colonies; MSF Herculis has responsibility for the fringes of the outer colonies, and the disputed Herculis Cluster region.

In practice, these regional assignments are administrative designations, the practicalities of frontier operations requiring the breakdown of operating forces into autonomous taskforces of regimental size or less.

ICM Aerospace Wing Command

The Aerospace Wing is the aerospace combat element of the Marine Space Force. Designed for aerospace support and air mobility, the aerospace wing is essentially an administrative formation, since much of its fighting strength is directly attached to the ICM divisions. Typically, a Marine aerospace wing operates some 300 dropships, 30 heavy-lift shuttles and 100 strikeships of varying types.

The Marine Aerospace Wing (MAW) is an administrative formation responsible for the operation of all aerospace craft within the Marine Space Force to which it is attached. Wing tasks include air superiority missions, reconnaissance, close air support, dedicated strike, forward supply, transport, casualty evacuation and search and rescue. Aerospace operations are also an integrated part of the standard Marine Infantry. A particular division is divided into three groups. Drop Groups ferry and support invading Marine Infantry. Tactical group is tasked with recon, and attack missions. Finally, the Support Group is assigned CasEvac, search and rescue, psyops, Special Forces insertion, and like tasks. The major workhorse of the ICM is the AS-114 Valkyrie, comprising a majority of all three groups.

As an example of the organisational makeup of a Marine Aerospace Wing (MAW), the 1st Marine Aerospace Wing is composed of:

- Marine Aerospace Group 11
- Marine Aerospace Group 13
- Marine Aerospace Group 16
- Marine Aerospace Group 39
- Marine Aerospace Control Group 38
- Marine Aerospace Wing Support Group 37



Unit insignia of the 108th Aerospace Company, the Sky Tigers

The Colonial Marine Special Operations Group

Although the notion of a Colonial Marine Special Forces contribution to the UEAF Special Operations Command (UEAFSOC) was considered as early as the founding of UEAFSOC in the early 23rd century, it was resisted by the ICM. However in the wake of the Colonial Wars, the Corps agreed in 2271 to supply a 2600-strong unit, ICM Special Operations Command (ICMSOC), which would answer directly to UEAFSOC.

The Colonial Marine Assault Unit

The building block of the Colonial Marine operating forces is the Marine Assault Unit, a reinforced battalion combat team designed to operate independently in areas of deep space, far from reinforcement or logistical support. The key to the MAU is its mobility and flexibility; an MAU incorporates its own dedicated starlift capacity, capable of deploying the entire unit swiftly to any trouble-spot planet. This starlift capacity, which varies in size according to the mission, is tasked to supply logistics for a minimum of 30 days of ground combat operations. UEASF fleet units are usually attached to the MAU to perform space control, reconnaissance and orbital bombing missions.

The line strength of an MAU is formed from two to four line infantry companies. An aerospace Drop Group and some Attack Group elements accompany the infantry complement. Each line company will usually incorporate support assets which may be attached down to the line platoons, including additional UA-571 remote sentries, M402 multiple-launch fire support mortars, HIMAT anti-tank missiles and the SIM-118 Hornet and LIM-417 Phalanx Surface-to-Air Missile systems. If sufficient starlift capacity is available, an armour company of fourteen tanks may be attached to the MAU's line strength.

The MAU is commanded by a headquarters platoon that co-ordinates the command, communication, intelligence and logistics functions of the unit. Attached to headquarters are a number of non-combat sub-units, including a logistics platoon, maintenance company and medical unit. Additional combat sub-units include a reconnaissance platoon, scout-sniper squad, combat engineering platoon and a heavy ordnance company which provides the battalion's heavy fire support and artillery guns, M201 multiple launch rockets, HIM-122 Lancer anti-ballistic missile systems and HIM-78 Sprint ground launched space weapons.

Colonial Marine Logistics

The challenge to Marine logisticians is immense; they must approach their missions with the same aggressive execution as the infantrymen in the assault. They have finite quantities of supplies at hand, yet have to operate a 'push mode' system, anticipating the needs of the forward units and moving loads to them even before they realize the need for it. Inevitably, this can lead to wastage when supplies are pushed forward to units who, for whatever reason, no longer need them; however, such waste is preferable to the disaster that can occur if supplies are not forwarded until after the need has arisen.

Because, even in a 'hot' conflict, Colonial Marine units are often dispersed in small units across continental distances, the UECM logistic prime movers are the ubiquitous AS-114 Cobra dropship and the AS-118 'Python' Heavy Transporter. In the field, the M570 all-terrain transport is the land based prime mover, with powerloaders often used on-site to offload cargoes.



ARMS AND MISSIONS

Search And Rescue

Often the ICM is called in for search and rescue duty because they have the fastest ships with the longest range. To meet these demands, the Combat Search and Rescue (CSAR) teams were formed. All ICM bases have CSAR teams on 24 hour standby, ready to be dispatched at a moment's notice to search and rescue missions in the cold depths of space or on hostile worlds

Team Size:

Varies, usually one platoon section at least.

Transport Type:

Typically a fast corvette or frigate.

Force Recon

Force Reconnaissance units are composed of Colonial Marines specially trained in covert insertion, reconnaissance, and surveillance tactics, and some have even received special operations training. The "Recon Marines" basic mission is to scout out the enemy and report what they find.

Team Size:

Platoon strength unit with support personnel.

Transport Type:

Typically part of a larger interstellar-capable force, the Force Recon unit usually has several Valkyrie or Loki class dropships at their disposal, in addition to ground-based scout vehicles.

Planetary Xenobiology Survey (PXS)

PXS teams are usually dispatched to newly surveyed planets or newly established colonies where alien lifeforms have been discovered. They investigate possible contamination by hostile organisms. The PXS crew is mostly science, with the military only playing a supporting role in the operation of the mission. The PXS ships are comprised of 50% laboratories and 50% Defence. The PXS team commander is often a military scientist.

Team Size:

50% are various scientists (mostly xenobiologists). Instead of the standard one synthetic per ship, PXS craft can have up to ten. Total crew per ship can be up to forty.

Transport Type:

Usually one ship, typically a Centurion or a Legionary class light cruiser.

Recovery And Salvage

Disaster still strikes in the 23rd Century. Be it a result of war, famine, disease or natural disaster on a planetary scale, someone has to pick up the pieces afterwards. If the location is still deemed too dangerous for emergency services and even ColSec, then the ICM are called in. R&S is a duty no-one wants, but it is a grim reality of life in the 23rd Century.

Team Size:

Varies. Ground teams or large numbers of dropships.

Transport Type:

Varies.

Rapid Reaction Force

Like CSAR teams, all ICM bases throughout colonised space maintain a company strength rapid reaction force that they can dispatch and deploy within a 12 hour turnaround period. Its missions include humanitarian rescue operations, the prevention of armed conflict, and even full-scale interventions to separate fighting parties.

Team Size:

Company strength unit with support personnel.

Transport Type:

Typically one destroyer accompanied by several corvettes, with a full compliment of aerospace and ground vehicles.

Marine Expeditionary Unit

The building block of the Colonial Marine operating forces is the Marine Expeditionary Unit (MEU), a reinforced battalion combat team designed to operate independently in areas of deep space, far from reinforcement or logistical support. The key to the MEU is its mobility and flexibility; an MEU incorporates its own dedicated starlift capacity, capable of deploying the entire unit swiftly to any trouble- spot planet. This starlift capacity, which varies in size according to the mission, is tasked to supply logistics for a minimum of 30 days of ground combat operations. UEAF fleet units are usually attached to the MEU to perform space control, reconnaissance and orbital bombing missions.

The line strength of an MEU is formed from three to four line infantry companies. An aerospace Drop Group and some Attack Group elements accompany the infantry complement. Each line company will usually incorporate support assets which may be attached down to the line platoons, including multiple-launch fire support mortars, anti-tank missiles and Surface-to-Air Missile systems. If sufficient starlift capacity is available, an armour company may be attached to the MEU's line strength.

The MEU is commanded by a headquarters company that co-ordinates the command, communication, intelligence and logistics functions of the unit. Attached to headquarters are a number of non-combat sub-units, including a logistics platoon, maintenance company and medical unit. Additional combat sub-units include a reconnaissance platoon, scout-sniper squad, combat engineering platoon and a heavy ordnance company which provides the battalion's heavy fire support and artillery guns, multiple launch rockets, anti-ballistic missile systems and ground launched space weapons.

Team Size:

With a strength of about 2,200 personnel, the MEU is normally built around a reinforced battalion, a composite aerospace squadron, and a MEU Service Support group.

Transport Type:

The MEU is deployed on four strike ships, typically destroyers.

Personnel

The Commandant of the ICM is the highest ranking officer of the ICM, though he may not be the senior officer in time and grade. He is both the symbolic and functional head of the Corps, and holds a position of very high esteem among Marines. The Commandant does not serve as a direct battlefield commander. The Commandant is a member of the Joint Chiefs of Staff, and reports to the Secretary of the Navy. The current Commandant of the ICM is General John Brannigan.

RANK STRUCTURE

As in the rest of the UEAF, ranks fall into one of three categories, in decreasing order of authority:

1. Commissioned Officer
2. Warrant Officer
3. Enlisted

To standardise compensation, each rank is assigned a pay grade. The following tables list the rank, abbreviation, pay grade, and insignia of each rank.


Commissioned Officers

Commissioned Officers are distinguished from other officers by their commission, which is the formal written authority, issued in the name of the President of the United Earth Federation that confers the rank and authority of a Marine Officer. Commissioned officer ranks are further subdivided into Generals, field-grade officers, and company-grade officers.




General Officer Rank Structure:

Rank	Grade	Insignia
General	O-10	
Lieutenant General	O-9	
Major General	O-8	
Brigadier General	O-7	

Field Grade Officer Rank Structure:

Rank	Grade	Insignia
Colonel	O-6	
Lieutenant Colonel	O-5	
Major	O-4	



Company Grade Officer Rank Structure:

Rank	Grade	Insignia
Captain	O-3	
First Lieutenant	O-2	
Second Lieutenant	O-1	

Warrant Officers

Warrant Officers provide leadership and skills in specialised fields. The UEAF confers commissions on its Warrant Officers, though they are generally not responsible for leadership outside of their specialty. Warrant officers come primarily from the senior Non Commissioned Officer ranks.

Warrant Officer
Rank Structure:

Rank	Grade	Insignia
Chief Warrant Officer	W-2	
Warrant Officer	w-1	

Enlisted

Enlisted Marines in the pay grades E-1 to E-3 are not "non-commissioned officers" (NCOs) and are generally referred to as "non-NCOs"; they make up the bulk of the Corps' ranks.

Those in the pay grades of E-4 and E-5 are non-commissioned officers. They primarily supervise junior Marines and act as a vital link with the higher command structure, ensuring that orders are carried out correctly. Marines E-6 and higher are Staff Non-Commissioned Officers (SNCOs), charged with supervising NCOs and acting as enlisted advisors to the command.

The E-8 and E-9 levels each have two ranks per pay grade, each with different responsibilities.

Gunnery Sergeants (E-7) indicate on their annual evaluations, called "fitness reports", or "fitreps" for short, their preferred promotional track: Master Sergeant or First Sergeant.








The First Sergeant and Sergeant Major ranks are command-oriented, with Marines of these ranks serving as the senior enlisted Marines in a unit, charged to assist the commanding officer in matter of discipline, administration and the morale and welfare of the unit.

Master Sergeants and Master Gunnery Sergeants provide technical leadership as occupational specialists in their specific MOS.



First Sergeants typically serve as the senior enlisted Marine in a company, battery or other unit at similar echelon, while Sergeants Major serve the same role in battalions, squadrons or larger units.

The Sergeant Major of the Marine Corps is a unique rank conferred on the senior enlisted Marine of the entire Marine Corps, personally selected by the Commandant of the Marine Corps.


Staff Non-commissioned Officer
Rank Structure:

Rank	Grade	Insignia
Sergeant Major of the ICM	E-9	
Sergeant Major	E-9	
Master Gunnery Sergeant	E-9	
First Sergeant	E-8	
Master Sergeant	E-8	
Gunnery Sergeant	E-7	
Staff Sergeant	E-6	

Non-commissioned Officer (NCO)
Rank Structure:

Rank	Grade	Insignia
Sergeant	E-5	
Corporal	E-4	

Enlisted
Rank Structure:

Rank	Grade	Insignia
Lance Corporal	E-3	
Private First Class	E-2	
Private	E-1	-

FORMS OF ADDRESS

Junior Marines, those not yet non commissioned officers, are typically addressed by their last names. Non-commissioned officers are addressed by rank and last name. All officers, both commissioned and warrant, are addressed as "sir" or "ma'am". Warrant Officers are addressed as "Sir", although not saluted as an officer. Addressing an officer by his or her rank is a technically accepted, but rarely used and often frowned upon, form of courtesy.

During recruit training, recruits are not considered full-fledged Marines; as a result, all Marines who have completed recruit training are addressed as "sir" or "ma'am" by incoming recruits who are beginning recruit training. Informally, some enlisted ranks have commonly used nicknames, though they are not official and are technically improper:

- A Gunnery Sergeant is typically called "Gunny" and (much less often) "Guns";
- A Master Sergeant is commonly called "Top";
- A Master Gunnery Sergeant is "Master Guns";
- or "Master Gunny". He also may be called "Top.";
- Differing from the Regular Army and Aerospace Force, all ranks containing "Sergeant" are always addressed by their full rank and never shortened to simply "Sarge".;
- A Private First Class is usually referred to as a PFC.

INITIAL TRAINING

Officers

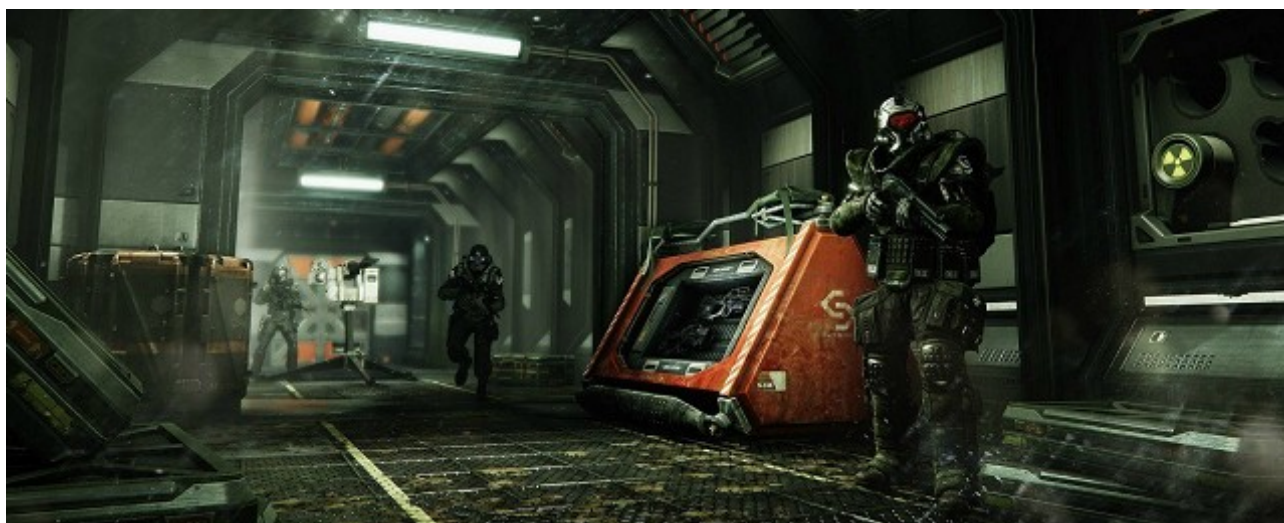
All Marine commissioned officers, regardless of accession route or further training requirements, attend the Basic School at Marine Corps Base Fort Tycho, Luna. There, they spend six months learning to command a rifle platoon. The Basic School, for second lieutenants and warrant officers learning the art of infantry and combined arms warfare, is an example of the Corps' approach to furthering the concept that "Every Marine is a rifleman".

Enlisted

Enlisted Marines attend recruit training, or boot camp, at either Marine Corps Recruit Depot (MCRD) Parris Island, just outside Beaufort, South Carolina. All recruits must pass an Initial Strength Test to start training. Recruits who fail to do so are placed in a Physical Conditioning Platoon, where they receive individualised attention and training until the minimum standards are reached.

Marine recruit training is the longest among the UEAF military services; it is 32 weeks long.

Following recruit training, enlisted Marines then attend School of Infantry training at Fort Tycho, Luna. Infantry Marines begin their Military Occupational Specialty (MOS) training immediately with the Infantry Training Battalion (ITB), while Marines in all other MOSs train for 22 days with the Marine Combat Training (MCT), learning common infantry skills, before continuing on to their MOS schools.



Uniform

The Colonial Marines have three main uniforms: Dress, Service, and Utility.

DRESS UNIFORM

The Marine Corps Dress uniform is the most elaborate, worn for formal or ceremonial occasions. It is also worn by Marine Corps enlisted recruiters on a daily basis. The Dress uniform, often seen in recruiting advertisements, is also often called "Dress Blues" or simply "Blues". It is equivalent in composition and use to black tie, worn at ceremonial events. It consists of a long-sleeved midnight blue coat with a standing collar, white barracks cover, plain white shirt, sky blue trousers with tan web belt or suspenders, white gloves, and black shoes and socks. The uniform may also be worn with a khaki long-sleeved shirt in place of the coat. The Mameluke Sword (for officers) or NCOs sword may be worn as prescribed.

NCOs, SNCOs, and Officers wear a blood stripe on their trousers.

SERVICE UNIFORM

The Service Uniform was once the prescribed daily work attire in garrison; however, it has been largely superseded in this role by the utility uniform. Consisting of olive green and khaki colours, it is commonly referred to as "Greens". It is roughly equivalent in function and composition to a business suit. It consists of green trousers with khaki web belt, khaki long-sleeved or short-sleeved button-up shirt, khaki necktie (with long sleeves), tie clasp, and black shoes. When worn with a green coat, it becomes the "Service Alpha" uniform, worn to formal but non-ceremonial occasions such as checking into a unit and court-martial hearings.

UTILITY UNIFORM

The Utility Uniform is intended for wear in the field or for dirty work in garrison, though as noted above it has now been standardised for regular duty. It is rendered in pixelated camouflage (sometimes referred to as digitals or digies) that breaks up the wearer's shape, and also serves to distinguish Marine uniforms from those of other services.

The approved headwear for this uniform is the utility cover, an eight-pointed brimmed hat that is worn "blocked", that is, creased and peaked. Unlike the Dress and Service uniforms, utilities are not permitted for off-base wear. Though exceptions are made for essential commuting tasks, e.g. picking up children from day-care or purchasing gas, the wear of utilities in public is otherwise ordinarily prohibited.

Equipment Overview

INFANTRY WEAPONS

The basic infantry weapon of the Interstellar Colonial Marine Corps is the M29 Tactical Assault Rifle, with the majority now being equipped with the A2 variant.

Suppressive fire at squad and platoon level is provided by the M56 Light Assault Gun and the M71 Squad Support Weapon. The integral 30mm grenade launcher of the M29 provides indirect fire support, along with the M90 Automatic Grenade Launcher. Precision fire is provided by the M42 Gauss Rifle. In addition the ICM utilises a variety of direct-fire rockets and missiles to provide infantry with an offensive and defensive anti-armour capability.



INFANTRY PERSONAL ARMOUR

The standard issue armoured suit worn by the ICM is the M54 Combat Armour Suit. A military issue armoured bodysuit worn in conjunction with either combat dress utilities (CDUs), or a Compression Suit, Combat Armour is a combination of Kevlar and plasteel armour plating with an ablative coating for extra protection against energy weapons. The suit offers

the option of 100% oxygen supply for low pressure use (in combination with a Compression Suit) or air at normal pressures.

GROUND VEHICLES

The ICM operates the same Cheetah Light Reconnaissance Vehicle (LRV) as the regular army. However, for its specific needs, the Corps uses the Panther Light Armoured Vehicle (LAV) a dedicated wheeled armoured personnel carrier used to provide strategic mobility. The ICM has numerous variants of the Panther LAV.

AEROSPACE CRAFT

The organic aerospace capability of the ICM is essential to its mission. The Corps operates aerospace craft mainly to provide transport and close air support to its ground forces. However, other aircraft types are also used in a variety of support and special-purpose roles.

The workhorse of the ICM is the AS-114 Valkyrie, which is much loved by the corps for its light-attack and light transport capabilities. Medium lift capability is provided by the AS-88 Baldur.

The majority of ICM orbital attack squadrons fly the AS-116 Vulture, or the AS-119 Buzzard. Close Aerospace Support is provided by the AS-90 Thor and the AS-110 Heimdall.

Corps Culture

As in any military organisation, the official and unofficial traditions of the Marine Corps serve to reinforce camaraderie and set the service apart from others. The Corps' embracement of its rich culture and history is cited as a reason for its high esprit de corps.

OFFICIAL TRADITIONS AND CUSTOMS

The ICM Motto

The Marine motto Per Mare, Per Terra, Per Astrum means "By Sea, By Land, By Space" in Latin.

The ICM Emblem

The ICM emblem is the 'flaming eagle' which incorporates the planet and stars from the UEF flag.



The ICM Ceremonial Sword

The Marine Corps officers' sword is a Mameluke Sword, similar to a Persian shamshir. It is only worn on ceremonial occasions.

NCOs are entitled to wear the NCO sword, essentially a ceremonial cutlass. Marine NCOs, along with Cavalry NCOs, the only enlisted service members in the UEAF authorised to carry a sword.

The ICM Birthday

The ICM celebrates its birthday on the 17th September, the day the signing of the Colonial Act brought the corps into existence.

Close Order Drill

Close Order Drill is heavily emphasised early on in a Marine's training. The Marine Corps uses close order drill to teach discipline by instilling habits of precision and automatic response to orders, increase the confidence of junior officers and non-commissioned officers through the exercise of command and give Marines an opportunity to handle individual weapons

UNOFFICIAL TRADITIONS AND CUSTOMS

Marines have several generic nicknames, mildly derogatory when used by outsiders but complimentary when used by Marines themselves. Famous nicknames include jarheads and leathernecks. Marines and those familiar with Marine Corps tradition will often object to the use of the term "former Marine" or "ex-Marine" because Marines are inculcated with the ethos "Once a Marine, always a Marine".

Veteran Marine refers to an individual that completed their service and has received an honourable or general discharge from the service. Veteran Marines may certainly be addressed "veteran Marines", yet Marines who have retired are commonly called "retired Marines". However, addressing any veteran Marine as "Marine", which they still are, is appropriate.

Marine Bases And Stations

The ICM operates 15 major bases throughout the Federal Colonies, 10 of which host operating forces. ICM bases are concentrated around the location of the Marine Space Forces (MSF), though smaller units and reserve units are also scattered throughout the Core Systems.

PRINCIPAL ICM BASES

Fort Tycho, Luna

Primary headquarters for I MSF Sol, Fort Tycho is built in an around the Tycho crater north of the Clavius ice mines. It is considered the 'crossroads of the ICM' as most Colonial Marines will attend training at Fort Tycho at some point in their careers. It is home to the Colonial Marine Corps University, which contains career schools Staff NonCommissioned Officers Academy, Marine Corps War College (MCWAR), School of Advanced Warfighting (SAW), Command and Staff College (CSC), The School of MAGTF Logistics (SOML) Expeditionary Warfare School (EWS) and Officer Candidate School (OCS), as well as a variety of other leadership and education programs.

Fort Plato, Luna

Plato serves as a major supply and transit hub for the ICM. It is also home to a UEAF weapons testing facility and R&D institute ('Plato Labs').

Unity Space Station, L1 Orbit

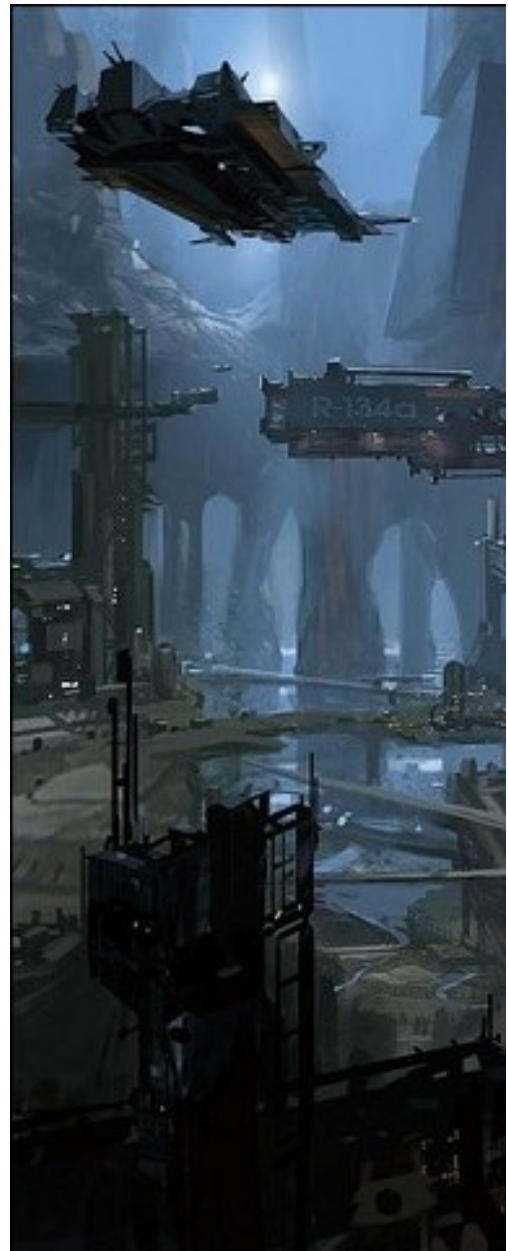
Although the primary base for I MSF Sol is Fort Tycho, elements are also based at Unity Space Station L1 Orbit, providing a rapid reaction military force for the Earth-Moon system should they be needed.

Fort Hadrian, Centauri Prime

Located on Atalanta Planum, a frozen region in the highlands of the northernmost continent of Centauri Prime in the Alpha Centauri star system, Fort Hadrian is headquarters to II MSF Centauri. There is a military prison located close to Fort Hadrian.

New Damascus, Eridanus:

Located on the planet Eridanus in the Omicron² Eridani star system, New Damascus is headquarters to III MSF Eridani, one of the largest UEAF bases in the Outer Colonies. In addition to several installations on the planet surface, there is also a large subterranean fortress



nicknamed The Citadel and a large orbital facility, which is home-base of the UEAF 8th Fleet under Admiral Ramsey. Eridanus is home to over 40,000 military personnel.

Fort Walawag, Niobe

The planet Niobe in the 70 Ophiuchi A planetary system is the location of the largest orbital military dry-docks outside of the Core Systems. The dry-docks were built by EnerTek prior to that corporation's collapse in 2246, and was commandeered by the UEAF at the start of the Colonial Wars as an emergency repair base for damaged ships returning from the Hercules Front.

The UEAF now maintains a sizeable garrison on and in orbit of Niobe (over 30,000 personnel), and is headquarters of IV MSF Hercules, established during the Colonial Wars. The main ICM base is located on the surface of the planet, at Fort Walawag.

Ares Fleet Base, Mars

On the other side of Phobos from John Carter Spaceport, Ares Fleet Base is still the largest military base in the UEF, home to the UEAF's 1st Fleet (also known as the Sol Defence Force). At any time, at least one ICM combat group and one UNSC battle group are stationed here, often with part of the group undergoing refit or repair in the large dry-dock facilities. The 1st Fleet's general staff is located here, along with its attendant command, control, and communications suite that ensures constant awareness of the situation in the Solar System. It is also the rumoured location for one of the UEF's Alpha-level AIs, but the UEAF refuses to confirm or deny those rumours.

Camp Orestheus, Callisto

A company strength ICM rapid reaction force is stationed at Camp Orestheus on the Galilean moon Callisto. The force is charged with providing support to the FedPol and ITC customs units policing the Trojan belt and Circum-Jove colonies.

Titan Sound, Titan

Titan is the UEAF 'hot dock' for the Sol Defence Fleet vessels assigned to the Deep Space Garrison. While Mars and Luna have larger military installations, Titan is better positioned to let starships intercept any unauthorised space vessel(s) inbound to the Home Worlds. UEF law dictates that no spacecraft may activate their F-Drive engines any close to Sol than the orbit of Saturn. Titan Sound spaceport is always host to at least a dozen UEAF fleet vessels, and has sizable aerospace and marine assets at its disposal.

Marine Expeditionary Units (MEU) from I MSF Sol are rotated through Titan Sound on a 6 monthly basis.

Fort Powell, Anjuna

The Tau Ceti War was the catalyst that led to the formation of the ICM. Almost a century and a half later, the planet Anjuna (scene of most of the fighting) is host to a permanent UEAF presence, both on the planet's surface, and on the orbiting moon.

Fort Powell, located on the moon is home to a UEAF Fleet Base, and Marine Expeditionary Units (MEU) from II MSF Centauri are rotated through Fort Powell on a 12 month basis.

Odin Forward Operations Base, Luyten 730-18

Odin Forward Operations Base (FOB) is centre of operations for the UEAF blockade of the Eurasian Rimworlds Combine (ERC). Odin is a large asteroid, over 200km across at its widest point that lies on the outskirts of the asteroid belt orbiting Luyten 730-18. Odin FOB lies in and around the 40km wide crater known as "Odin's Eye" that gives the base its name. The base is home to over 10,000 UEAF personnel, including an ICM Rapid Reaction Force, as well as the fleet crews and support personnel required to maintain the base and fleet vessels stationed here.

The UEAF 3rd Fleet, including the aerospace carrier Vassily Zaitsev, is based at Odin FOB. From here it maintains the military blockade and monitors the DMZ for signs of treaty violation.

Character Generation

The following information should allow a Game Master to generate Interstellar Colonial Marine characters.

BACKGROUND AND LIMITATIONS

In the 23rd century Humanity has spread out to the stars. Although many colonial marines come from Earth, many more have been born and raised in the offworld colonies. In the military of the 23rd Century, males and females are treated equal in all possible respects. The characters are highly trained and expensively equipped specialists. Each Marine has signed for at least six years. Basic training takes at least one year. After two more years as Private ("Grunt") the Marine has received military occupational specialty (MOS) training. The minimum number of years in service for characters made with this template therefore is 3. Minimum rank is usually Private First Class (PFC).

BASIC TRAINING

Basic Training gives the marine the following skills: Armoury; Dodge; EVA; Throw; Unarmed Combat; Zero G Combat; Computer Operation; Medical First Aid; Navigation; Survival; Vacc Suit; Sneak; Blade; Gun Combat (Rifle); Gun Combat (Handgun); Gun Combat (user defined); Vehicle.

The PC gets INT x15 to allocate between the above skills as percentiles. All the above skills do not have to have points given to them, but points undistributed are lost. No skill can start at higher than 75% (including bonuses).

MILITARY OCCUPATIONAL SPECIALTIES

To show that someone has successfully passed Military Occupational Specialty (MOS) training the term "Specialist" is often placed before his rank (e.g. Specialist Corporal). The short form given in parenthesis behind the MOS name is the standard designation. The different MOS are:

- Arms Technician (arms-tech)
- Combat Rifleman (Rifleman)
- Communications/Computer Technician (com-tech)
- Driver Technician (drive-tech)
- Flight-Engineer/Co-pilot Technician (flight-tech)
- Heavy Weapons Specialist
- Medical Technician (med-tech)
- NCO or Officer
- Pilot Technician (pilot-tech)
- PsiCorps Military Attaché (psi-tech)
- Search and Rescue Specialist (Rescue-tech)
- Sniper/Scout (Recon)



A player chooses from one of the above MOS classes, and depending on type chosen, receives INT x 10 to allocate to the following skills:

Arms Technician (Arms-Tech):

Responsible for the maintaining and repair of offensive/defensive equipment and the placing and use of demolition explosives, an arms-tech is tasked with meeting mobility, counter mobility and survivability requirements of the marine force he is assigned to, both onboard ship and in the combat zone. As a secondary role, arms-techs are also called upon to fight as infantry when the need arises.

MOS Skills:

Armoury; Computer Operation; Data Analysis; Demolitions; Electronics (Security/Systems); Mechanical (players choice); Powered Armour; Science (Physics/Chemistry).

Combat Rifleman (Grunt):

A combat rifleman could best be described as a career grunt, but this is selling them short. They are infantrymen through and through, and form the backbone of any fighting force.

MOS Skills:

MOS skill points are allocated to the Basic Training skills list again, plus 1d3 extra skills as personal specialties. Note that the rules regarding starting maximums still apply.

Computer Technician (Com-Tech):

In the 23rd century, computers are essential to every division of the military. Com-techs have the responsibility of maintaining, processing and troubleshooting military computer and communications systems, as well as providing technical skills in the combat zone should they be required. As a secondary role, Com-techs are also called upon to fight as infantry when the need arises.

MOS Skills:

Administration; Computer (Programming, Security); Data Analysis; Electronics (Communications, Security, Systems).

Drive-Tech:

Responsible for driving and maintaining any ground vehicles assigned to the unit. As a secondary role, Drive-techs are also called upon to fight as infantry when the need arises.

MOS Skills:

Electronics (Communications); Gunnery; Mechanical (Vehicle); Spot Hidden; Vehicle.

Flight-Tech:

Except on small craft, two pilots usually make up the cockpit crew. The co-pilot, often called the Flight-tech, shares flying and other duties, such as communicating with air traffic controllers and monitoring the instruments.

The Flight-tech also monitors and operates navigation and weapons systems, as well as making minor in-flight repairs. As a secondary role, Flight-techs are also called upon to fight as infantry when the need arises.

MOS Skills:

Astrogation; Data Analysis; Electronics (Communications); Forward Observer; Gunnery; Mechanical (Aerospace); Navigation; Pilot (Aerospace); Spot Hidden.

Heavy Weapons Specialist:

Essentially a Combat Rifleman trained in operation of heavy squad and platoon support weapons, as well as vehicle and ship mounted ordnance. Each squad usually has at least one Weapons-tech.

MOS Skills:

Gun Combat x2: (PCs choice); Gunnery; Unarmed Combat; Forward Observer.

Med-Tech:

Essentially army-paramedics, Med-techs are trained to give emergency medical treatment in the field, or assist military doctors. As a secondary role, Med-techs are also called upon to fight as infantry when the need arises.

MOS Skills:

Fast Talk; Data Analysis; Electronics (Systems); Medical (First Aid, Medicine); Pharmacy; Psychology; Science (Biology, Chemistry); Survival; Interrogation.

NCO/Officer:

From squad leaders up to platoon commanders, this MOS covers all ranks that a player can start as. If you want to play a non commissioned or commissioned officer, first choose an MOS speciality, then add the following list of extra skills to choose from. The Game Master has final say on who can play an NCO or Officer and who cannot.

MOS Skills:

Administration; Data Analysis; Fast Talk; Instruction; Interrogation; Leader; Orate; Psychology; Speak Other Language; Strategy (Planetary); Tactics (Small Unit).

Pilot:

Pilots are highly trained professionals who are trained to fly interstellar, interplanetary and aerospace craft to carry out a wide variety of tasks. They usually share duties such as communicating with air traffic controllers and monitoring the instruments with a co-pilot. As a secondary role, Pilots are also called upon to fight as infantry when the need arises.

MOS Skills:

Astrogation; Electronics (Communications); Gunnery; Mechanical (Aerospace); Navigation; Pilot (Aerospace, Space Craft); Science (Physics); Spot Hidden.

Psychic Operations Group:

A quasi-military branch of the MAA, the Psychic Operations Group (commonly referred to as PsiCorps) operatives are usually assigned as 'psychic security' to government officials, or attached to UEAF units on missions that might benefit from the availability of psychic powers. As a secondary role, PsiCorps are also called upon to fight as infantry when the need arises.

MOS Skills:

Administration; Data Analysis; Fast Talk; Interrogation; Streetwise; Psychology; Science (choose).

Recon:

Marine Recon specialists are tasked with providing the commander of a larger force of Marines with information about his operational area. Their missions usually focus on specific information requirements which cannot be obtained by means other than putting a soldier on the ground to observe and report. Recon Marines are, by nature, capable of independent action in support of the larger unit's mission.

MOS Skills:

Climb; Survival; Electronics (Communications); Conceal; Devise; Forward Observer; Listen; Recon; Spot Hidden; Search; Hide; Sneak; Gun Combat (Gauss Rifle).

Rescue-Tech:

Combining their marine training with a broad technical and paramedic skillset, Rescue-techs are specially trained for search and rescue missions in the cold depths of space or on hostile worlds.

MOS Skills:

Computer (Systems); Climb; Electronics (Systems); Engineering; EVA; Jump; Mechanical (player choice); Medical (First Aid); Pharmacy.

SKILL DEFINITIONS

Certain skills have been added that didn't exist in the original rules. They are listed below, followed by their descriptions.

Devise:

This is the skill of both assembling and disassembling mechanisms such as locks and traps that are not electronics based. It can also be used for repairing mechanical devices.

Forward Observer:

Marines with this skill have been trained to call on and adjust artillery (projectile, missile and energy) fire from distant batteries and from ships in orbit. If artillery of any form is available (including communication with the firing battery), the first shots will invariably miss the target. On each subsequent round that fire is delivered, the marine must roll his skill to adjust the fire to successfully hit the target.

Instruction:

Marines with this skill have extensive training in instructing students in a clear and lucid manner and providing motivation for learning. Any skill that the PC becomes a master in (i.e. over 90%) then they can act as a Trainer to improve fellow PCs skill in that area.

Leader:

Marines with the Leader skill have led troops into battle situation before. The Leader skill is required to control a group of more than 6 NPCs. A successful roll will make the NPCs follow general orders of the marine, unless the marine is of a lower rank than those he/she is trying to order, or the issued orders are obviously flawed.

Mechanical Aerospace:

Marines with the above skills have the ability to operate and repair common propulsion systems used by Aerospace craft of the UEAF.

Mechanical Vehicle:

A marine with this skill has the ability to repair the inner workings of ground vehicles such as APCs or tanks.

Standard Marine Infantry Kit

All soldiers who enlist with the Interstellar Colonial Marine Corps are issued a standard equipment kit. The Marine can allocate this equipment in three ways: Combat, Non-Combat, and Other. Combat equipment is what the Marine will take into a fire fight. Any equipment to be left in a transport or on-site base before going into a possible combat zone is noted as Non-Combat Equipment. Any other items (including personal items) which may be left on board the space transport or at a divisional base are noted as Other Equipment. Keep in mind that most weaponry and some specialised equipment are only issued prior to or during a mission. If a large amount of equipment is destroyed or lost during a mission due to a character, an inquiry is held. If the character's reasons are deemed inadequate the cost of a new item or items is deducted from his pay.

The standard issue kit includes the following items:

CLOTHING

- 5x Sets of military issue underwear;
- 5x Shirts, unmarked, mono-colour;
- 2x pairs military combat boots black, reinforced heel and toe, non-conductive;
- 3x Complete sets military Combat Dress Utility fatigues (CDUs);
- 3x Sets basic insignia (name, unit, UEAF patches, all 'brass', etc.);
- 1x Parade uniform with dress cap, complete.

EQUIPMENT

- 1x Toiletry kit (lasts 60 days of field use);
- 1x Military identification card (includes embedded microchip containing medical, military, and personal history);
- 1x Set standard UEAF electronic dog-tags (all medical, military, and personal history recorded on an imbedded microchip);
- 1x Military identification chip implant (contains info identical to dog-tags and ID card);
- 1x Chronometer;
- 1x Pack mouldable ear plugs, flat black memory foam (reusable, 20 plugs per pack, reduces noises by 30 decibels when used);
- 1x pair of sunglasses non-glare, adjustable, with hard case and cleaning instructions and supplies, belt clip included as well on case;
- 2x Penlights (one white light, one red light for night ops);
- 1x Mess Kit;



- 1x Standard Medkit;
- 1x Individual Marine Pack;
- 1x IR Poncho;
- 1x Rebreather/Respirator;
- 1x Bedroll;
- 1x Entrenching/Multi-tool;
- 2x Pairs of heavy duty gloves
- 1x Personal Data Assistant (PDA);
- 1x Personal Communications System (PCS);
- 1x Set of M3 Combat Armour;
- 1x M29 Tactical Assault Rifle;
- 1x M31A on-board medical diagnostic suite;
- 1x Mark V Combat Knife;

AEROSPACE CREW ADDITIONAL KIT:

- Flight Fatigues and Anti-G-Suit.

Nuclear, Biological And Chemical Weapons

Nuclear Weapons

Authorization for the release of nuclear weapons can only be given by the senior officer present in theater. Given that some Colonial Marine operations take place in small units on the periphery, access codes are made automatically available to the next in command should the senior officer be incapacitated. Though the decision to use nukes is discretionary, Space Command has strict guidelines on their employment on inhabited worlds, designed to limit collateral damage to inhabited areas, installations and the environment.

The Colonial Marines employ only three means of delivery for nuclear weapons: the nuclear landmine, the aerospace-launched transcontinental cruise missile, and the orbital re-entry vehicle. Because Marine nukes are designed for tactical employment and because of the great accuracy of delivery, their warheads are of comparatively low yield compared to those in Army or UEAf service, the absolute largest being no more than 1 megaton nominal yield. With the exception of nuclear landmines, the employment of airburst attacks is recommended to reduce the effects of fallout and residual radiation.

Defense against nukes is largely limited to preventing the delivery of a hostile warhead. Against Marine military equipment, the effects of EMP and TREE (Electromagnetic Pulse and Transient Radiation Effects in Electronics) are almost nil due to the hardening and shielding techniques built into all systems. In the event of a hostile nuclear strike, decontamination procedures and the administration of anti-radiation medical treatments must be immediately implemented.

Chemical Weapons

Chemical weapons in Colonial Marine service are deployed for tactical rather than strategic employment. At the low end, they can be used to quell riots or other civil disturbances by the use of riot gases or psychoactive chemicals for incapacitation. At the high end are deadly nerve toxins for use against troops in the field and animal populations. The permission of the theatre commander must be sought before employing any chemical agent stronger than riot gas.

Chemical weapons can be employed in two ways – either as a direct attack on the enemy, or as a means to deny ground by contaminating it. For direct attack, chemical agents range from mild non-persistent riot gases such as orthochlorobenzalmalononitrile (CS) and dibenoxazepine (CR), through psychoactive agents such as ALD-91 (a new analog of lysergic acid diethylamide that incapacitates without causing long-term genetic damage) and BZ (3-quinuclidinyl benzilate), to a menu of highly lethal persistent and non-persistent nerve toxins such as VX-80, VZ, CN-20

and GX. Most of these are stored safely in binary form, for delivery as a spray, artillery shell, rocket warhead or orbital reentry vehicle.

Biological Weapons

Biological weapons are primarily strategic weapons and are not generally issued to field units. Biological weapons generally come in two forms: bacteriological and exomorphic.

During the Colonial Wars, the primary employment of bioweapons has been in the use of bacteriological warfare to cull sedition and insurrection movements. However, against human populations, viral disease strains can be engineered to meet specific purposes before being introduced into a hostile population along predetermined vectors. Disease vectors include animals (via food animals, rats or biting bugs that may transmit the disease), introduction to a population's water supply, or by airborne delivery.

Exomorphic bioweapons are animals the size of insects or greater. They are usually some form of swarming creature that can be used en masse against an area or large population. Such exomorphic weapons can be deadly in themselves – they contain a lethal bite or sting – or can be employed as a carrier for bacterial weapons.

The major problem associated with both types of bioweapon is control – a disease or exomorph swarm can easily 'backfire' on the user. Therefore, careful protocols must be observed when using such weapons; and care must be taken to engineer some means of deactivation into the weapon. The usual method is to ensure that the bioweapon is unable to reproduce and/or has a finite lifespan, after which the weapon is inert or dead.



Marine Terminology

Many Corps customs are derived from the many years of service afloat. Even ashore Marines customarily use nautical terms. Floors are "decks," walls are "bulkheads," ceilings are "overheads," and corridors are "passage-ways". The order "Gangway" is used to clear the way for an officer ashore, just as it is afloat. Among other terms commonly used: "two-block" is to tighten or centre; "square-away" is to correctly arrange articles or to take in hand and direct an individual; "head" is the bathroom, and "scuttlebutt" is a drinking fountain or an unconfirmed rumour. In the Marine Corps, the nautical expression, "Aye, aye, sir" is used when acknowledging a verbal order. "Yes, sir" and "No sir" are used in answer to direct questions. "Aye, aye, sir" is not used as this expression is reserved solely for acknowledgment of orders.

Some of the other terms inherent in Corps tradition and history are:

- ADRIFT Loose from towline or moorings; scattered about; not in proper stowage
- AFT Referring to or toward the stern (rear) of a vessel
- ALL HANDS All members of a command
- ASHORE Any place outside of a naval or Marine Corps reservation

- AS YOU WERE Resume former activity
- AWEIGH Said of the anchor. As soon as the anchor has broken away from and is no longer fastened to the bottom
- BELAY To make fast or to secure, as in "belay the line;" to cancel or to disregard a statement just made
- BELOW To go downstairs
- BREAKOUT Take out of stock or storage: to prepare for use
- BRIG A place of confinement; a prison
- BROWN BAGGER A married man
- BOW The front portion of a ship
- BRIDGE The portion of a ship's structure from which it is controlled when underway
- BROW A portable walkway from the pier or jetty the ship's quarter deck
- BUTTKIT An ashtray
- CARRY ON The order to resume previous activity
- CHIT A receipt or authorization; a piece of paper
- FANTAIL The main deck of a ship at the stern
- FIELD DAY Barracks cleanup
- FIELD SCARF Regulation Marine Corps uniform neck tie
- FORECASTLE The upper deck at the bow on which the ground tackle is located
- GALLEY Shipboard kitchen; kitchen of a mess hall; mobile field mess
- GATOR An amphibious ship; one who serves in the amphibious Navy
- GEEDUNK The place (aboard ship) where candy, ice cream, soda, and smokes can be purchased
- HATCH Door or doorway
- LADDER Stairs
- LIBERTY Absence of enlisted from the ship or command for less than 96 hours for purposes of rest and recreation which is not charged as leave
- POLICE To straighten or to tidy up
- PORT Left
- QUARTERDECK The ceremonial location on board ship when the ship is moored or at anchor (It is located close to the brow or accommodation ladder and is the watch station for the Officer of the Deck.)
- SEABAG The bag used to stow personal gear
- SECURE Stop; finish; end; make fast put away in storage
- SHIPPING OVER Reenlisting
- SICK BAY Hospital or dispensary
- SKIPPER Commanding Officer
- SKYLARK Goof-off; to loiter
- STARBOARD Right
- STERN The blunt end (rear) of a ship
- SWAB A mop
- TOPSIDE Upstairs
- TURN TO Begin work; get started
- WARDROOM on board ship, the officer's living room and dining area; also used to signify all of the officers serving on the ship

General Leadership

Objectives Of Military Leadership

Leadership has passed from Marine to Marine since the founding of the Corps. It is the art of influencing and directing men and women to accomplish the mission of keeping our country free; to obtain their obedience, respect, confidence, and loyal cooperation; and to maintain the sense of accomplishment. In essence, leadership boils down to three fundamentals: Know your "stuff" and yourself; be a role model, and set the example; know your people, and look after them.

Concern for and attentiveness to troop welfare not only means providing the basics of survival (food, water, shelter, and rest), but it also means attending to the numerous other details that make a unit effective. It means training and critiquing so that "lessons learned" do not have to be relearned. It means talking with military members as if they are members of the family. It means looking out for Marines as they instinctively look out for their leader and for each other.

1. The Primary Objective Of Leadership – Mission Accomplishment

Military discipline. A moral, mental, and physical state in which all hands respond to orders or to the will of the commander or leader, whether or not he or she is present.

- Self-discipline is the basis of discipline.
- Effective discipline is the sense of accomplishment of a goal.
- Sound discipline is a matter of consistency and firmness.
- Efficient performance in battle. The ultimate objective of military discipline: Overcome fear and replace it with action.

Standards of good discipline. Department attention to duty, example, and decent behaviour which enable men and women to accomplish and to give their best. The results of a well-disciplined unit are clearly observable:

- All assigned missions are accomplished.
- Marines are confident and maintain a sharp appearance.
- Marines are proud of their unit; they believe it has a good reputation (esprit).
- Weapons and equipment are available and well-maintained.
- Marines at all levels are actively engaged in doing their duties they place value on the things that they do.
- Marines cooperate and willingly helping one another.
- Training is well planned, well conducted, consistent, and thoroughly evaluated for individual and unit strengths and weaknesses and feedback, for the individual and the group, is immediately provided
- In hostile situations, the unit fights successfully under stress.

2. The Secondary Objective Of Leadership – Troop Welfare

Counselling, as a leadership tool, is used to improve performance and to aid in solving problems or circumventing potential problems. The types of counselling are:

- performance,
- personal,
- professional, and
- career.

Keys to constructive performance counselling are:

- Accurate evaluation of performance,
- Clear and concise communication of the evaluation to the subordinate,
- Mutual agreement concerning performance areas where improvement is required,
- Active subordinate response, and

- Concrete suggestions for improvement.

Keys to effective personal counselling are:

- Suggestions and advice are offered only after learning all of the pertinent facts.
- Advice on professional matters is left to the professionals.
- Problems that are not solved are referred to someone who can handle the problem.

Keys in conducting professional counselling include:

- Finding out what the problem involves and then setting up an appointment for the Marine to talk to the proper specialist (e.g., medical or drug and alcohol officers, 1st Sergeant, Sergeant Major, or the chaplain); and
- Using the chain of command to match a Marine to the proper specialized expert.

Keys to career counselling are:

- Knowing and understanding the Marine (their motivations, skills, and attitudes),
- Knowing the advantages of a career in the Marine Corps and the opportunities and alternatives that are available, and
- Knowing the basic qualifications required for reenlistment.



The Nine Common Elements Found In The Combat Environment

1. Violent, unnerving sights and sounds;
2. Casualties;
3. Confusion and lack of information;
4. Feeling of isolation;
5. Communications breakdowns;
6. Individual discomfort and physical fatigue
7. Fear, stress, and mental fatigue;
8. Continuous operations; and
9. Homesickness.

The Five Stresses A Marine Can Expect In Combat

1. Extreme risk and fear;
2. "Fog of War" – literal fog (dust, smoke, and debris on the battlefield) and mental fog (confusion, uncertainty due to lack of knowledge of the enemy, chaotic noise, mental and physical fatigue, and fear;
3. Discomfort and fatigue;
4. Casualties;
5. Boredom

Military Justice

UNIFORM CODE OF MILITARY JUSTICE

A code that applies to all members of the uniformed services. Its purpose is to ensure order and to provide a means of adjudicating infractions of the law. The obedience to military law is the responsibility of every Marine.

PUNITIVE ARTICLE

The following list contains the descriptive title

and general provisions of selected punitive articles of the Uniform Code of Military Justice (UCMJ) .

1. Article 86 Absent Without Leave:

Any Marine who, without authority:

- fails to go to his appointed place of duty at the time prescribed;
- goes from that place or
- absents himself or remains absent from his unit, organization or place of duty at which he is required to be at the time prescribed;

shall be punished as his commanding officer or a court-martial may direct.

2. Article 89 Disrespect Toward a Superior Commissioned Officer

Any Marine, who behaves with disrespect toward his superior commissioned officer, shall be punished as his commanding officer or a court martial may direct.

3. Article 90 Assault on or Wilfully Disobey A Superior Commissioned Officer

Any Marine, who:

- strikes his superior commissioned officer
- draws or lifts up any weapon against his superior commissioned officer
- offers any violence against his superior
- commissioned officer. or
- wilfully disobeys a lawful command of his superior commissioned officer while that superior commissioned officer is in the execution of his office;

Shall be punished as his commanding officer or a court-martial may direct. If the offence is committed in time of war, a court-martial may direct that the Marine be punished by death.

4. Article 91 Insubordinate Conduct Toward a Warrant Officer, NCO, or Petty Officer

Any Marine, who:

- strikes or assaults
- wilfully disobeys; or
- in language or deportment toward a warrant officers non-commissioned officer, or petty officer while that officer is in the execution of his office;

shall be punished as his commanding officer or court-martial may direct.

5. Article 121 Larceny And Wrongful Appropriation

Any Marine who wrongfully takes, obtains, or withholds (by any means) any money, personal property. or article of value of any kind:

- with intent permanently to deprive or defraud another person of the use and benefit of property or to appropriate it to his own use or the use of any person other than the owner, steals that property is guilty of larceny; or
- with intent temporarily to deprive or defraud another person of the use and benefit of property or to appropriate it to his own use or the use of any person other than the owner is guilty of wrongful appropriation

Shall be punished as his commanding officer or a court-martial may direct.

6. Article 128 Assault

Any Marine, who:

- attempts or offers with unlawful force or violence to do bodily harm to another person, whether or not the attempt or offer is consummated, is guilty of simple assault;
- commits an assault with a dangerous weapon or other means or force likely to produce death or grievous bodily harm is guilty of assault consummated by battery; or
- commits assault and intentionally inflicts grievous bodily harm with or without a weapon, is guilty of aggravated assault;

Shall be punished as his commanding officer or court-martial may direct.

7. Article 134 General Article

Any Marine, who become involved in:

- all disorders and neglects to the prejudice of good order and discipline in the armed forces,
- all conduct of a nature to bring discredit upon the armed forces, or
- crimes and offences not capital,

shall be punished as their commanding officer or a court-martial may direct.

FORMS OF PUNISHMENT

The following are the forms of punishment which may be imposed for violations the of the UCMJ. All forms of punishment are subject to restrictions specified in the UCMJ. The UCMJ provides limitations of sentences based on the nature of the crime, the form of adjudication (nonjudicial punishment or court-martial), and the position/rank of the individual assigning the punishment or the type of court-martial which convicted the Marine.

1. Reprimand

The convening authority of a court-martial or a commanding officer may punish a Marine by censure. A reprimand is a severe form of censure that adversely reflects upon the conduct of the person addressed. A reprimand my be presented either orally or in writing; however, it is normally delivered in the written form.

2. Forfeiture Of Pay And Allowances

A forfeiture deprives the individual accused, of all or specific amount, of money to be accrued (earned in the future) as a result of service in the United Earth Armed Forces.

3. Fine

A fine makes the accused immediately liable to the United Earth Armed Forces for the entire amount of money specified in the sentence. A fine may only be adjudged by a court-martial, and it may be adjudged instead of or in addition to a forfeiture. However, a fine is normally used only as a sentence in cases when the accused has been unjustly enriched as a result of the offence convicted.

4. Loss Of Numbers, Lineal Position, Or Seniority

This form of punishment is reserved for commissioned officers only.

5. Reduction In Pay Grade

A reduction in pay grade causes the accused to be of the rank and pay grade to which reduced.

6. Restriction To Specific Limits

Restriction deprives the accused of normal liberty privileges. The sentence will specify the physical and geographic locations in which the individual is allowed, how long the restriction shall last, and when that individual must be present at specific locations. A Marine who is being punished by restriction is not exempt from performing normal duty requirements.

7. Hard Labour Without Confinement

The hard labour is performed in addition to regular duties.

8. Confinement

Confinement deprives the Marine sentenced of normal liberty privileges and is a form of physical restraint which provides for the assignment of quarters at a specific location usually a correctional facility. Additionally, unless specified in the sentencing, the performance of hard labour is also required.

9. Confinement On Diminished Rations

This form of physical restraint is confinement to specific quarters (normally the ship's brig) while enduring a specific reduction of rations (normally bread and water only). This form of confinement may only be assigned while the Marine sentenced is embarked aboard Naval vessel and may not exceed 3 days.

10. Punitive Separation

This form of punishment results in the convicted Marine being removed from the service and given either a dishonourable or bad-conduct discharge.

11. Death

COURTS-MARTIAL

The three types of courts-martial are summary, special, and general. The differences among the three types of courts-martial are based on their composition, level of authority, and severity of punishments authorized.



Summary Courts-Martial

A summary court-martial is composed of one officer with the rank of Captain or higher. The lowest level of authority to convene a summary court-martial is normally a battalion commander or the equivalent; however, under special circumstances, a commanding officer of a separate or detached command may be granted the authority by his superiors.

A summary court-martial may adjudge any punishment not forbidden by the UCMJ, except death dismissal, dishonourable discharge without confinement for more than 45 days, restriction for more than 2 months, or forfeiture of more than 1 months pay. In the case of sergeants and above, a summary court-martial may not award a reduction of rank of more than one rank, hard labour without confinement, or confinement.

A summary court-martial may not try a commissioned officer, warrant officer, cadets, midshipmen for any capital offences. However, no Marine can be compelled to accept a summary court-martial. Since a summary court-martial is less formal than the other two types of courts, a Marine may refuse to accept trial by summary court-martial and may request a special court-martial. However, he should be aware that conviction by a special or general court-martial constitutes a felony conviction.

Special Courts-Martial

A special court-martial can be composed of a military judge alone, not more than three impartial active duty armed service personnel, or a military judge and not more than three armed services personnel. The impartial personnel; can be commissioned officers, warrant officers, or enlisted personnel. If the accused is a commissioned officer, no member can be a warrant officer or enlisted person. If the accused is a warrant officer, no member can be an enlisted person. If the accused is an enlisted person, he may request that at least one third of the members of the court be enlisted.

The lowest level of authority to convene a special court-martial is normally a brigade or regimental commander or the equivalent. However, under special circumstances, a commanding officer of a separate or detached battalion may be granted the authority by his superiors.

A special court-martial may adjudge any punishment not forbidden by the UCMJ, except death, dismissal, dishonourable discharge, confinement for more than 6 months, hard labour without confinement for more than 3 months, or forfeiture of more than two-thirds pay for more than 6 months.

Normally, a special court-martial may not try any capital offence where there is a mandatory punishment beyond the maximum punitive power of a special court-martial.

General Courts-Martial

A general court-martial can be composed of a military judge alone or a military judge and not more than five impartial armed services personnel. The impartial personnel can be commissioned officers, warrant officers, or enlisted personnel. Of the accused is a commissioned officer, no member can be a warrant officer or enlisted person. If the accused is a warrant officer, no member can be an enlisted person. If the accused is an enlisted person, he may request that at least one third of the members of the court be enlisted.

The lowest level of authority to convene a general court-martial is normally a division, wing, or base commanding general, or the equivalent. However, under special circumstances, a commanding officer of a separate or detached unit may be granted the authority by his superiors.

A general court-martial may adjudge any punishment not forbidden by the UCMJ.

RIGHTS

The rights of the accused before judicial and nonjudicial proceedings are based on the laws of this country and specified in the UCMJ. Your rights before judicial proceedings include but are not limited to:

- being considered innocent until proven guilty,
- being considered innocent until proven guilty,
- remaining silent and to being informed that if you do make a statement it can be used against you in a court-martial,
- being represented by a lawyer,
- being protected from double jeopardy,
- calling witnesses on your behalf,
- having your sentence reviewed,
- having a speedy trial,
- being informed of all charges against you,
- having the assistance of an interpreter,
- protection against illegal searches and seizures,
- challenging members of the court,
- having enlisted representation on special and general courts-martial,
- being tried by a military judge, and
- being tried by court-martial vice nonjudicial punishment Your rights before nonjudicial proceedings include but are not limited to:
 - appearing before all boards and fact-finding bodies:
 - examining, objecting to, and challenging She introduction of all physical and documentary evidence;
 - examining, cross-examining, and challenging the testimony of all witnesses;
 - introducing evidence on your behalf;
 - testifying on your behalf; and
 - making a voluntary statement for the official records.

REQUEST MAST

You can use this procedure to discuss any matter with your commanding officer in your chain of command. The procedures are designed to allow for timely and appropriate responses to your request. If you are following the proper procedures for requesting mast, no one may prohibit you from speaking with your commanding officer at the proper time and place. This includes any commanding general who is located in the same geographic area as you.

The procedural points for request mast below the commanding general level are contained in the following:

- You may submit your request at the lowest echelon and have it forwarded via the chain of command to the commander with whom you wish to speak.
- You do not have to state the matter of concern, either orally or in writing;. to anyone in the chain of command until you have reached the officer to whom you originally requested mast.
- You should not have to wait more than 24 hours between levels of the chain of command whenever possible.
- You may request mast without fear of prejudice to your interest.

- Upon completion of request mast, you must make a written statement regarding the degree of satisfaction you had with the outcome of your request.
- If your request mast to a higher commander is resolved by a lower commander. you must make a written, witnessed statement indicating the degree of satisfaction you have had and your willingness to withdraw the request to higher authority.
- Your request mast will be conducted at the earliest reasonable time and not later than 72 hours after submission whenever possible. If your request is of an emergency nature, it should be heard within 24 hours if at all possible.

The additional procedural points for request mast with your commanding general are contained in the following:

- You must prepare a complete written, statement indicating the reasons for the request mast. It must include a list of witnesses with a summary of the expected testimony of each.
- You must, if applicable, attach any documents that support your request.
- Your statement must also include a list of persons in your chain of command that you have already seen and any action that they have taken.

JUDICIAL PUNISHMENT

The purpose of nonjudicial punishment is to provide an essential and prompt news of maintaining good order and discipline to your unit's commanding officer. It also promotes positive behaviour changes in Marines without the stigma of a court-martial conviction.

1. If you are the accused Marine, you have the option of either demanding trial by court-martial or accepting nonjudicial punishment.
2. Once your commanding officer has passed judgment and sentenced you, if you feel that the punishment awarded to you is unjust or disproportionate to the offence, you may appeal all or part of your sentence to the next higher authority. He may set aside, decrease, suspend, or let stand any portion or all of the original sentence. However, he cannot in any way increase the original sentence.

DISCHARGES

As a Marine, you may be given one of five different discharges. The type of discharge you are awarded is based on the method by which it is awarded and the character of your service.

Type Of Discharge	Character Of Service	Method Of Award
Honourable	Honourable	Administrative
General, under honourable conditions	Honourable	Administrative
General, under other then honourable conditions	Other than honourable	Administrative
Bad-conduct	Other than honourable	General or special court martial
Dishonourable	Dishonourable	General court-martial

To receive a dishonourable discharge. a Marine must be convicted by a general court-martial of an offence of a dishonourable nature. These are offences generally recognized by the civilian courts as being serious felonies. However, a Marine may also be awarded a dishonourable discharge if he his been convicted by court martial of three or more offences in the last year, regardless of whether any of the charges were severe enough to result in a dishonourable discharge by themselves.

For a Marine to receive a bad-conduct discharge, he must have been convicted by a general or special court-martial of an offence under the UCMJ which was serious enough to warrant this form of discharge. A Marine may also receive a bad-conduct discharge from a court-martial for a minor offence W he has previously been found guilty of repeated offences in a combination of judicial and nonjudicial proceedings. Additionally, a Marine may be awarded a bad conduct discharge if he has been convicted by court-martial of two or more offences in the past 3 years even if none of the previous or current charges are severe enough to warrant such a discharge.

A Marine may receive a general discharge under other than honourable conditions if his service has been characterized by conduct that was a significant departure from the conduct expected of a Marine. This usually involves illegal acts or commission of acts that are characterized by violence that result in serious bodily injury, breach of special trust, disregard for the normal superior-subordinate relationship, drug abuse or trafficking, or endangering the security of the Marine Corps. Under these conditions, the discharge is awarded in lieu of court-martial.

A Marine may receive a general discharge under honourable conditions if his service was characterized by significant negative aspects reflected in his performance or conduct. This type of discharge is normally awarded to Marines whose average proficiency or conduct marks fall below 3.0 or 4.0 respectively.

LAW OF WAR

Discipline in combat is essential. Disobedience to the law of war dishonours the United Earth Federation, the Interstellar Marine Corps, and the individual Marine, and far from weakening the enemy's will to fight, it strengthens it. The following principles require the Marine's adherence in the accomplishment of any mission. Violations have an adverse impact on public opinion both national and international and have on occasion served to prolong conflict by inciting an opponent to continue resistance and in most cases constitute violations of the UCMJ. Violations of these principles prejudice the good order and discipline essential to success in combat.

- Marines fight only enemy combatants.
- Marines do not harm enemies who surrender. They must disarm them and turn them over to their superior.
- Marines do not kill or torture prisoners.
- Marines collect and care for the wounded, whether friend or foe.
- Marines do not attack medical personnel, facilities, or equipment.
- Marines destroy no more than the mission requires.
- Marines treat all civilians humanely.
- Marines do not steal. Marines respect private property and possessions.
- Marines should do their best to prevent violations of the law of war. They must report all violations of the law of war to their superior.



The Federal Law Enforcement Authority

by Wikipedia, John Ossoway, Gary Cooper, Tomas Härenstam & Graham Raynes

"There's a reason you separate military and the police. One fights the enemies of the state, the other serves and protects the people. When the military becomes both, then the enemies of the state tend to become the people."

Unnamed Military Officer

The fight for order and justice against chaos and rebellion is a story as old as civilisation itself, and the exodus of humanity to the stars only broadened that battleground. In a civilisation as dispersed as that of the United Earth Federation (UEF), the enforcement of law requires a special breed of men and women to police environments as diverse as overpopulated urban sprawls and remote colonial settlements light years away from anywhere, and to maintain the security of the space-lanes and trade routes.

It is the men and women of the Federal Law Enforcement Authority who fight this unceasing war. The Federal Law Enforcement Authority (FLEA) is a criminal investigative intelligence agency, and is the primary investigative and policing arm of the UEF. It was set up to provide leadership and an administrative framework for the departments that are tasked with enforcing the law and defending the interests of Earth and her colonies, and ensuring impartial administration of justice for all Federal Citizens. At present, FLEA and its subsidiaries has investigative jurisdiction over violations of more than 200 categories of federal crimes, making FLEA the de-facto law enforcement agency of Earth and the Federal Colonies.



FLEA was formed in 2088, four years after legislation contained in the Geneva Statute effectively globalised law enforcement. FLEA and the Federal Court system override traditional national criminal jurisdictions. Any individual who commits a crime in UEF territory is liable for arrest and prosecution by these bodies. In the almost two centuries since inception, the capabilities and far-reaching influence of FLEA have become both feared and respected by the 23rd Century criminal. While uniform officers limit their activities to the Federal Colonies, FLEA Marshals and Special Agents often venture into the lawless Outer Rim to hunt down and apprehend fugitives from Federal justice.

FLEA often works in conjunction with other Federal agencies, including the Interstellar Trade Commission (ITC), Interstellar Colonial Authority (ICA) and the Interstellar Colonial Marines (ICM). FLEA has the authority to take charge of any federal investigation because of the broad power mandate it carries.

Organisation

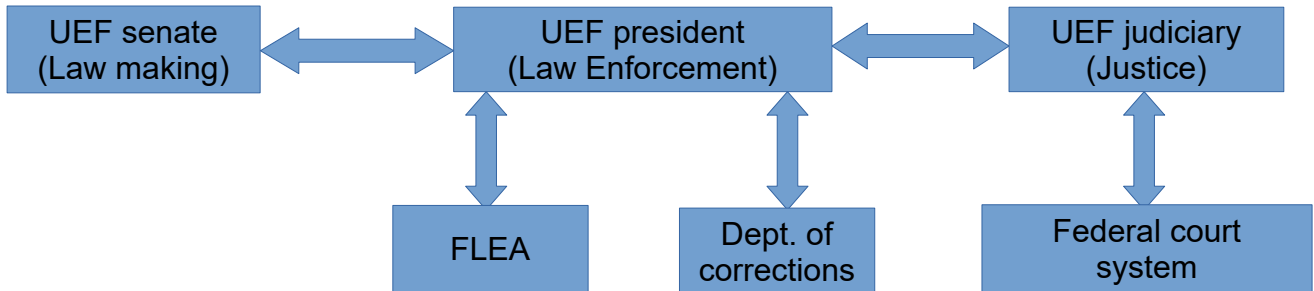
As with the majority of UEF government departments on Earth, the Federal Law Enforcement Authority is headquartered in Geneva. The head of FLEA is the Director, who is appointed by the President of the UEF. They must be confirmed by the UEF Senate and serve ten-year terms. The current FLEA Director is Atticus Cromwell, who was appointed in 2264 by then UEF President Chan.

In addition to the Geneva HQ, Administrative Field Offices are maintained in 43 major cities across the Federal Colonies. Each Field Office is overseen by a Senior Special Agent (SSA), except those located on Mars and Centauri Prime. Due to their large size, these offices each are managed by an Assistant Director (AD). The ADs are assisted by SSAs responsible for specific programs. The size and resources of field offices may vary, but their basic duties are the same, and include:

- Managing the deployment and movement of Special Agents;
- General logistical management of law enforcement assets throughout Federal Colonies Zones 1-3;
- Divisional management of law enforcement agencies, especially during joint operations;
- Field headquarters for Federal Marshals;
- Field liaison with other federal institutions e.g. the Interstellar Trade Commission, Interstellar Colonial Authority.

In addition to field offices, FLEA maintains 40 legal attaches at ICA facilities across the Federal Colonies, and over 400 resident liaison officers with regional colonial police forces.

The relationship of FLEA to other UEF government organisations can be seen in below:



OPERATIONAL ARMS

The major operational arms of FLEA are as follows:

1. Special Investigations Agency (SIA);
2. The Federal Police Force (FedPol);
3. The Colonial Security Force (ColSec);
4. The Federal Marshals Service;
5. MetaPol;
6. The Judicial Service;
7. Internal Affairs.

The largest of these by far are FedPol and ColSec.

1. The Special Investigations Agency (SIA)

The primary role of the Special Investigations Agency (SIA) is to uphold and enforce the criminal laws of the UEF, to combat interplanetary and interstellar criminal organisations, and to provide leadership and criminal justice services to federal and colonial policing and other federal institutions. Their jurisdiction is the Federal Colonies Zones 1-3, and SIA Special Agents have special powers to investigate crimes against federal property or personnel in the Outer Rim Territories.

Since the end of the Colonial Wars, FIA have been tasked with protecting the UEF against terrorist and foreign threats.

Investigative priorities have been assigned to the following areas:

1. Protect the UEF from terrorist attack (as of 2257);
2. Protect the UEF against foreign intelligence operations and espionage;
3. Combat public corruption at all levels;
4. Protect UEF civil rights;
5. Combat interplanetary/interstellar criminal organisations and enterprises;
6. Combat major white-collar crime;
7. Combat significant violent crime;
8. Support federal/colonial policing and other federal institutions such as the Interstellar Trade Commission;



2. The Federal Police Force (FedPol)

Policing of Earth and the Sol Colonies is primarily handled by the Federal Police Force. There are two broad categories of Federal Police:



1. Investigative agencies including: Vice, Serious Crimes, Drug Enforcement, Immigration and Customs Enforcement.
2. Uniformed security police agencies.

While the investigative agencies of FedPol have system wide jurisdiction for enforcement of federal law, the uniformed agencies are split into administrative districts with territorial jurisdictions. At a crime or disaster scene affecting more than one such administrative district, multiple police agencies may be involved in mutual aid agreements. Usually FLEA will dispatch an SIA team to take command in such complex situations.

3. The Colonial Security Force (ColSec)

The Colonial Security Force, under the mandates of FLEA have been charged with the day to day security of colonies of the UEF. Policing the colonies is a tangled nightmare of logistics, poor communications between systems, local politics and a constant arms race between criminals and the police. Despite these problems ColSec has been remarkably successful in bringing UEF law to the colonies.

ColSec operate throughout the Core Systems and Outer Colonies, and to a limited extent into the Outer Rim Territories. These agencies range in size from one-officer agencies to the 40,000 men and women of the Emerald Coast Police Department, Centauri Prime. ColSec departments are usually limited to predefined territorial jurisdictions for enforcement of federal law. The Colonial Act (2140) requires that any Federal colony with a population greater than 1 million must contact FLEA to set up a police department. In their organisation, procedure, training doctrines and day to day responsibilities, they are identical to FedPol in all but name.



4. The Federal Marshals Service

The Federal Marshals Service is responsible for apprehending wanted fugitives, providing protection for the federal judiciary, transporting federal prisoners, protecting endangered federal witnesses and managing assets seized from criminal enterprises.

The Federal Marshals Service is based in Arlington, Virginia. It is headed by a Director, who is assisted by a Deputy Director. FMS Headquarters provides command, control and cooperation for the disparate elements of the service.



5. The Metasensory Police

The Metasensory Police or MetaPol are tasked with preventing psychic terrorism, rape, entrapment, and blackmail or identity theft. MetaPol also sometimes get called into white collar crime investigations where psychics are suspected to have been involved. MetaPol officers are also sometimes seconded out as Psychic Bodyguards to important FLEA personnel and members of the government.

6. The Judicial Service

Once you have laws you must have a system of enforcement and punishment. These are the UEF paid lawyers, independent magistrates and judges of the judicial system.

Judicial Hearings:

Punishment of petty crimes can take the form of fines or restrictions in movement. (A curfew) These petty crimes warrant a Judicial Hearing, in front of three magistrates who judge the case. These courts are run for crimes that do not have a prison sentence attached.

Judicial Court:

A judicial court is run for crimes that carry a prison sentence. A Judicial hearing is in front of a jury of twelve and has an adversarial approach. UEF law follows the principles of innocent until proven guilty.



7. Internal Affairs

The internal affairs division of FLEA investigates incidents and plausible suspicions of lawbreaking and professional misconduct attributed to officers on the force. The department was set up in response to public perception that regional internal affairs investigations are biased in favour of police officers. Due to the sensitive nature of this responsibility

officers working internal affairs are not in a detective command, but report directly to the agency's chief, or to a board of Senior Special Investigation Agents.

Internal Affairs are derisively referred to as "the rat squad" by FedPol and ColSec officers.

UNIFORMED OFFICERS

Also referred to as The Patrol, in some ways the role of the uniformed police officer has not changed significantly since the 21st century. While technology and training methods are markedly different from contemporary models, the uniformed officer role is still one of keeping the peace, patrol, protecting crime scenes, traffic control, crime prevention and detaining criminals.

Within patrol there is no departmentalisation (i.e. traffic police etc) of role. Manpower and resources are an ongoing issue for FedPol/ColSec uniformed officers, and in response they have developed an overlapping approach in police duties. A police officer can expect to perform several roles during an average working day. There is, however, one area of uniform that is segregated from normal police duties. A police officer can apply to be a member of a Special Firearms Unit. (SFU), but those duties will run adjacent to patrol requirements and the officer will be on call for SFU duties.

UNIFORM DUTIES

The following are the three core duties of FedPol/ColSec uniform officers:

Order Maintenance

This is the broad mandate to keep the peace or otherwise prevent behaviours which might disturb others. This can deal with things ranging from a barking dog to a fist-fight. Police are usually called-on to "handle" these situations with discretion, rather than deal with them as strict violations of law, though of course their authority to deal with these situations are based in violations of law.

Law Enforcement

Those powers are typically used only in cases where the law has been violated and a suspect must be identified and apprehended. Most obvious instances include robbery, murder, or burglary. This is the popular notion of the main police function, but the frequency of such activity is dependent on geography and season.

Service

Services may include rendering first aid, providing tourist information, guiding the disoriented, or acting as educators (on topics such as preventing drug use). A recent independent study showed that 70% of all calls for police assistance did not involve crimes, but this may not be the case in all parts of the Federal Colonies. Because police agencies are traditionally available year-round, 24 hours a day, citizens call upon police departments not only in times of trouble, but also when just inconvenienced. As a result, police services may include roadside auto assistance, providing referrals to other agencies, finding lost pets or property, or checking locks on vacationers' homes.

UNIFORM STRUCTURE

The structure of FedPol/ColSec uniform officers is based loosely on a military system. Firstly there is the officers themselves. Standard protocols dictate that there must always be a two uniformed police officers on patrol together. (However, manpower and budget restraints can mean this is not always practicable) These patrol teams report to the duty sergeant, the senior police officer on the watch. The Duty sergeant stays in police headquarters monitoring police activity and managing uniform response.

Rank Structure:

Rank	Description
Probationer	Lowest of the low.
Patrol Officer (PO)	Standard police officer.
Patrol Sergeant: (PS)	Usually a senior police officer. Usually one sergeant for every ten Patrol Officers.
Duty sergeant	The Senior Sergeant who remains in the station and coordinates patrols, shift rota and books in suspects. 1 per shift. (With a few civilian administrators to assist.)

UNIFORM SPECIALIST UNITS

Special Firearms Unit (SFU)

This is the specialist weapons response team of FedPol/ColSec. Small in number but highly trained these officers perform duties as police snipers, aggressive arrests procedures and civilian threat suppression. In larger space ports some units have been trained in hostile ship boarding tactics by marine specialists. (A lucrative market for ex marines is training FedPol/ColSec officers in firearms and tactics as paid advisors) The SFU is nominally composed of volunteers from patrol who attend there normal duties and can be on call for emergency, or pulled from normal duty in advance if required.

They are more heavily armoured than normal patrol officers and use military issue firearms. The SFU also make use of custom built STV which are armoured and have a 12.7mm minigun as well as gas rockets. In domed or sealed colonies they often use a custom built and heavily armoured ground carrier.



Pilots

The pilots of FedPol/ColSec are a valued resource and many are ex-military. They perform the often dangerous job of pursuing criminal in space via fast moving cutters or flying police suborbitals into potentially hostile situations.

INVESTIGATIVE OFFICERS

Investigations is a catch all term used by FedPol/ColSec to describe those multi-skilled non-uniformed police detectives tasked with dealing with serious crimes like narcotics, murder and people smuggling. Investigations use a web of databases, contacts and intelligence to collate and investigate crime. The size of investigations depends greatly on the size of the colony. However it is usually a fourth of the total number of uniform.

Investigators often deal with several cases at any one time. An investigation team size is dictated by the potential complexity of the case a murder investigation may have up to five or six detectives working on it at the same time. Investigations have developed a fearsome reputation for dogged determination in the pursuit of a criminal. Investigations have a multitude of resources available to them like extensive laboratories, criminal profiling software, holographic crime scenes and the Criminal Records Database. (CRD). The CRD is a database that ties together standard citizen DNA id records with criminal records and profile. This database is frequently updated and information is passed from relay point to relay point. However with communication delays it is possible for some criminal to be "ahead" of their crime by several F drive jumps or data to have become corrupted during transmission.

Recruitment of Investigation personnel come directly from uniform. It is a given that all detectives must at least spend three years in patrol before applying to take the investigations entrance exams. If successful they are often shipped to a larger colony where more suitable training facilities can be provided. Training is demanding and rigorous. There are constant reviews and drop outs are common. Once the patrol officer has completed their training they are returned to their colony and they then have a year's probation and teamed with a "mentor" who will assist in their "real" training.

SPECIALIST UNITS

Scene Of Crime Officers (SOCO)

When evidence need to be collected these are the experts that often examine a crime scene and attempt to find sufficient evidence to assist in an arrest and prosecution They often wear hermitically sealed bio hazard suits to protect themselves and the crime scene. Within SOCO there are several sub departments, like Digital forensics, ballistics, id tracing and, of course, the coroner.

The scene of crime officer is the only officer that can "clear" a crime scene for investigators to enter. However the crime scene is often remote scanned beforehand to insure that no criminals are still present in on the scene. Standard procedure when finding a crime scene is for uniform to seal the site. SOCO and investigations are called. SOCO examine the site and investigations can enter once cleared.



Undercover

Possibly one of the most dangerous forms of police work. Undercover police NEVER operate in the colony of their birth as the risks are too high. It is a dangerous profession that encourage the loner and has a high burn out rate.

Rank Structure:

Rank	Description
Junior detective	While ostensibly able to tell a Duty sergeant what to do, most learn quickly not to.
Detective	Most Investigators will be detectives.
Lt Detective	Senior detective.
Captain	Head of the investigations department.

SPECIAL AGENTS

The Special Investigations Agency (SIA) of FLEA is split into two types of personnel: Special Agents and Support Staff. Special Agents are the field operatives and intelligence gatherers, the analysts and forensics experts, who spend most of their time working on cases from the FLEA Investigative Priorities list. Serious crimes like serial killers or gangland wars can result in Special Agents either being requested or exercising their mandate to step in and take over the case. The SIA has greater resources than local police forces, and can draw on a vast range of experts in a variety of fields to act as consultants.

Special Agent Career Paths

Though there are many specialties in the Special Investigations Agency, Special Agents are only split into three main career paths:

■ Field Agent

Field Agents spend a large part of their time in the field on investigative work as opposed to at an SIA office or headquarters. Field Agents usually work in pairs, though can also work alone or in a larger group. Field Agents are usually armed, but the weapon is always concealed in order to blend in and avoid being conspicuous. Some assignments require that Field Agents go undercover, travelling using fake identity documents that may be under the name of a front organisation or shell corporation.

■ Analyst

Analysts are specialists highly trained in a specific, sometimes limited area of knowledge. Examples of SIA Analysts include criminal psychologists and computer systems analysts.

■ Forensics

Special Agents who are trained in forensics are ultra-specialised individuals. Forensics runs the whole spectrum of expert in this field from scene of crimes personnel to forensic accountants and engineers.



SIA Specialist Units

■ Behavioural Analysis

The Behavioural Analysis Unit of SIA is tasked with providing assistance to law enforcement agencies through the process of criminal investigative analysis. This is a process of reviewing crimes from both a behavioural and investigative perspective. It involves reviewing and assessing the facts of a criminal act, interpreting offender behaviour, and interaction with the victim, as exhibited during the commission of the crime, or as displayed in the crime scene. Behavioural Analysis Unit staff conduct detailed analyses of crimes for the purpose of

providing one or more of the following services: crime analysis, investigative suggestions, profiles of unknown offenders, threat analysis, critical incident analysis, interview strategies, major case management, search warrant assistance, prosecutive and trial strategies, and expert testimony.

■ Critical Incident Response Unit

The Critical Incident Response Unit facilitates the SIAs rapid response to, and the management of, crisis incidents. With teams of varying size at each FLEA Administrative Field Office, the unit deploys investigative specialists to respond to terrorist activities, hostage takings, child abductions and other high-risk repetitive violent crimes. Other major incidents include prison riots, bombings, crashes (both in and out of planetary atmosphere), and natural disasters. Personnel from this unit are on call around the clock, seven days a week, to respond to crisis incidents.

■ Counter Terrorism

Working hand-in-hand with partners in local law enforcement, military intelligence, and diplomatic circles, the job of the Counter Terrorism Division is to neutralise terrorist cells and operatives in the Federal Colonies and to help dismantle terrorist networks.

Counter Terrorism Agents work in information gathering and analysis and in conjunction with tactical units whose role is to directly engage terrorists and prevent terrorist attacks.

■ Tactical Support

The Tactical Support Division ensures that the SIA has full-time, tactical teams stationed at each FLEA Administrative Field Office capable of being rapidly deployed to protect the citizens of the United Earth Federation.

The members of the tactical units are usually ex-armed forces, specially trained and equipped for close-quarters battle with emphasis on stealth and performing the mission with minimal casualties. Mission profiles include take-over force (assault teams), snipers, Explosive Ordnance Disposal experts and intelligence officers.

■ Forensic Science

The successful investigation and prosecution of crimes require, in most cases, the collection, preservation, and forensic analysis of evidence. Forensic analysis of evidence is often crucial to determinations of guilt or innocence.

SIA Agents from the Forensic Science Division are trained in forensic examination, and the safe and efficient methods of collecting, preserving, packaging, and shipping evidence from a crime scene.

FEDERAL MARSHALS

Federal Marshals protect the federal courts and ensure the effective operation of the judicial system. They are the enforcement arm of the UEF Judiciary and Federal Courts System, providing a clear line of demarcation between the Judiciary and day to day law enforcement personnel.

There are three main branches of the Federal Marshals Service:

- Domestic Affairs (Earth/Sol)
- Colonial Affairs (extra solar colonies)
- Special Operations (Outer Rim)

While all branches of the service involve long hours and a lot of interplanetary and interstellar travel, it is worse for the men and women of the Special Operations branch.

These individuals spend so much time in cryosleep that they have earned the nickname 'Sleepers'.

Federal Marshals also have the common law based power to enlist any willing civilians as deputies. In the Old West this was known as forming a posse, although under the Colonial Act (2140), they cannot use soldiers for law enforcement duties.

Rank Structure:

Rank	Description
Deputy Marshal	While ostensibly able to tell a Duty sergeant what to do, most learn quickly not to.
Marshal	Fully qualified Marshal.
Senior Marshal	Senior Marshal.
Administrator	Head of a regional Marshals department.

METASENSORY OPERATIVES

Those individuals with psychics abilities who make up the ranks of the Metasensory Police (MetaPol) are Telepaths and Precogs in the main, as these two Talents are the most valued by the law enforcement agencies.

MetaPol Operatives employ their special abilities to interrogate those who have committed crimes against the Federation, or to predict the outcome of certain events. MetaPol is headquartered at the Winterthur Institute, just outside Winterthur, Switzerland.

MetaPol operatives are typically assigned on a case by case basis, although some are given more permanent positions with regional law enforcement departments if their presence is seen to be warranted. In addition, MetaPol try to maintain a permanent presence at each of the FLEA Administrative Field Offices spread throughout the Federal Colonies.

When in the field, MetaPol officers usually operate alone, or are paired up with a local liaison officer.



Operative Mission Profiles

■ Information Retrieval

Telepaths are often required to pull information out of suspects minds. This action can only be performed with a court order, and with an independent witness present to confirm that only information pertinent to the case in question is recovered.

■ Prediction

Precogs are called in by police units to predict possible outcomes of investigative decisions, or to help locate criminals by foreseeing their movements. Their uncanny recall ability is also sometimes used to obtain information about crime scenes where normal recording is impossible.

Rank Structure:

Rank	Description
Deputy Operative	While ostensibly able to tell a Duty sergeant what to do, most learn quickly not to.
Operative	Fully qualified MetaPol Officer.
Senior Operative	Senior MetaPol Officer.
Administrator	Head of a regional MetaPol department.

REP-DETECT UNIT

Created in 2213 by the United Nations, the Replicant Detection Unit is the foremost authority on upholding and enforcing the criminal laws and regulations regarding the domestic use and abuse of Replicants and all other regulated technologies within Earth borders. Though beginning as a specially trained police squad for identifying and retiring trespassing Replicants illegally residing within Earth borders, the RDU has evolved over the decades from a threat-focused law enforcement agency to an intelligence-driven security organization. It is the principal investigative arm of the UEF for all Replicant-related matters, with sole jurisdiction to investigate criminal activity or accusations regarding any monitored entities and technologies. The RDU manages all aspects of the enforcement process, with their operations primarily targeting public safety threats, such as criminally accused or charged Replicants, criminally accused or charged humans wanted for unlawful use or abuse of regulated technologies, and criminal obstructions of RDU operations and UEF justice committed by Replicant or Autons on Earth.



Evolving over time from a threat-focused law enforcement agency to an intelligence-driven security organization, the Replicant-Detection Unit has progressively expanded its jurisdiction and diversified its capabilities. It no longer serves as merely the UEF's principal investigative arm for all regulated entities and technologies. The RDU now also represents UEF interests as the foremost authority on the nature of these technologies and the threats they present, both to public safety and the socio-economic stability of the system.

Politics

Police work is not just about solving the case. It's about navigating the rigid system and complex political waters of law enforcement. Politics can be a full-time profession for some, a forced obligation or burden for others. Yet no matter what kind of cop you are, you're still a cop who must follow the rules or suffer severe penalties.

NEW HORIZON, core rules 6.2 – volume 2

As the UEF governs all law enforcement on Earth, the FLEA's head of command is the UEF appointed Police Commissioner. The person who truly runs the show is the Chief of Police, along with the Inspector General who independently oversees Internal Affairs. All three hold court on the upper-most floor of the RDU HQ, which you can't even access without approval from security protecting all points of entry 24/7.

The RDU remains an autonomously run division within the FLEA's Office of Special Operations, which also comprises the Detective Bureau, the Counter- Terrorism Bureau, the Special Operations Bureau, and the Transit Services Bureau. Many RDU officers are direct reassignments from FLEA Special Ops units, along with recruits and select appointments from the academy, specialized divisions such as MetaPol, and outside UEF agencies.

Commanding Officer in Charge of the RDU is Police Deputy Chief David Holden. Few envy his job. It's him behind the podiums at press conferences, and his ass on the line when you screw up. Most of his day is spent answering to a circle of vultures forever stalking overhead: the Commissioner, the Governor, the District Attorney, the UEF, the Inspector General, the press, even Wallace Corp and other special interests. He's also embroiled in constant internal conflicts with the other FLEA divisions who envy the freedom and funding of the RDU.

Old Iron Lung is a legend from the old days, and Holden has been the one-man army keeping the RDU afloat for years. He's also usually your Reporting Officer, receiving regular updates on any open investigations, though ROs may hail from other LAPD divisions or out- side agencies depending on the case particulars.

In truth, little has changed in the RDU since its foundation. Including the people. Being a cop has always been a family business, and there are RDU legacies and rivalries spanning for generations. There are old-timers like Holden, Gaf, and McCoy who used the first V-K machines and took down the last N-6s. Living embodiments of the trenchcoat-toting cultural icons burnt into public memory.

And yet a new era is dawning. From the cutting-edge Crime Lab to the new generation of hot shot recruits reared on Blade Runner fables and drunk on dreams of future grandeur, the face of the RDU grows fresher and fiercer by the day. And that was before Wallace's N-9 Blade Runner feet showed up. Even the Chief was broadsided by that masterful move on the Go board by Wallace, but while many at the RDU balked at first, the steep increase in conviction rates and retirements since bringing them on speaks for their prowess and determination. The FLEA may never wholly embrace their N-9 office mates, but quite a few have already come to acknowledge (even respect) this dogged new addition to the RDU repertoire.

The RDU Deputy Chief

As one of the first Blade Runners on the force, David Holden quickly distinguished himself as a gifted interrogator and master of the Voight-Kampff machine. In 2219, Holden's career was nearly cut short when he was injured in the line of duty while pursuing the same Nexus-6 fugitives who later murdered Eldon Tyrell.

Suffering a near fatal wound, Holden was hospitalized for months and later became one of the first officers to accept synthetic prosthetics. Breathing through synthetic lungs, Holden received the moniker "Iron Lung" that (to his chagrin) lingers even today. A fierce tracker, Holden served more retirement orders than nearly any RDU officer. Rising up the ranks on a "zero tolerance" political ticket, his leadership helped the RDU persevere through the riots and the Blackout, ultimately becoming the obvious choice for Commander in Charge of the Rep-Detect Unit once the prior Deputy Chief Harry Bryant stepped down from command in the late 2220s.

Everything starts at the top. Unless otherwise specified, all Blade Runners directly report to Deputy Chief David Holden. Detectives receive their case assignments and most orders directly from the Deputy Chief, and detectives are expected to regularly submit status reports, case documentation, and other paperwork to Holden as they forward investigations and complete casework. Updates can be delivered in many ways: in person meetings, Vid-Phon calls and messages, KIA updates, LAPD Mainframe upgrades, even by proxy messenger.

How often you report is a strategic decision. The DC can't help but ask questions or bust chops, so it's sometimes in your favor to report less than he might want. To keep certain theories or findings to yourself until the time is right. After all, it's often easier to ask for forgiveness than permission. Particularly when poking at beehives or sniffing around in places you probably shouldn't.

He may not have patience for you, but Holden wouldn't have that job without a huge network and a mind for politics. So, when you need strings pulled or red tape cut, the DC is one of your best allies. You need his direct approval to obtain search warrants and retirement orders, file for wiretaps and surveillance details, obtain special equipment and purchases, or request back-up from other RDU divisions.



With a few phone calls, he can even arrange meetings with outside specialists, informants, politicians, and industrialists, or tap resources and personnel from other UEF agencies and organizations.

Though Holden can be a great ally, do not mistake him for a friend. He will doggedly support any Blade Runner, so long as they close cases and serve his agenda. Yet if you break the law, defy orders, push too many buttons, or bring shame onto the RDU, there will be consequences. You may escape with a reprimand if you're lucky, but worse or repeated offenses can lead to demotions, suspensions, or worse. He may take you of a case, suspend you from field work, order psych evaluations (or Baseline Tests), arrange Internal Affairs reviews, even kick you out of the RDU, take your badge entirely, or file criminal charges against you. Then again, exceed his expectations and it'll be Holden recommending you for raises, promotions, and commendations.

VICE

Founded in 2223 as a Task Force against the Replicant and Autons Underground, Vice is an intelligence-gathering support division, responsible for collecting insights on any ongoing and organized criminal enterprises, including crime syndicates, gangs, the Human Supremacy Movement, and the Replicant Underground. Vice is responsible for infiltrating, deterring, and neutralizing such institutions and any human efforts to violate UEF regulations or obstruct justice.

Vice also collaborates with other Rep-Detect units during fugitive man hunts, and enforces various laws against Replicant-related hate crimes and criminal acts such as illegal trafficking, theft, gaming, counterfeiting, and animoid cruelty. Vice Detectives primarily work undercover, so they only work under chosen aliases. Their true identities remain classified, even to fellow officers.

Retirement

The RDU's most infamous enforcers, Retirement is the division specially trained for fugitive investigations: enforcing UEF judicial orders and mitigating high-risk threats against the UEF and the general public, including the fulfillment of any retirement orders issued against convicted synthetic and Autons fugitives.

Retirement is solely charged with identifying, locating, apprehending, and neutralizing known high-risk fugitives that pose significant threats to the UEF, the judiciary process, and public safety. They also assist in high-risk security details, overseeing the transportation and protection of high-value individuals, witnesses, or prisoners, and spearhead any seizures or forfeitures of illegal goods and high-value assets, instruments, or illicit gains that enable criminals or criminal activities.

No longer empowered to retire Replicants or Autons on sight, a retirement order must be issued via official FLEA channels only after a burden of proof has been found. Without an official writ, Retirement officers may only shoot to kill upon provocation, namely self-defense or directly witnessing the death, injury, or mortal endangerment of an officer, civilian, or the general public.

As their assignments are the most dangerous, Retirement operatives receive hazard pay and nice bonuses for fulfilling each retirement order. As anyone who receives a retirement order has been legally proven guilty, Retirement officers are notoriously cold and methodical about their work. As the cityspeakers say: "Nyugdijas or nothing." Nyugdijas is cityspeak for retired.



Important Locations

Many specialised FLEA functions are located at facilities in Geneva (Earth) and Viking City (Mars) as well as at Armstrong (Luna) and Providence (Centauri Prime). In addition there are several orbital installations in the Sol system.

FEDERAL LAW ENFORCEMENT HEADQUARTERS, GENEVA

The executives, special agents, specialists, and professional staff who work at the FLEA headquarters building in Geneva have the responsibility of directing, organising and coordinating FLEA activities on Earth and throughout the Federal Colonies. This work includes:

- Setting priorities and policies;
- Maintaining the integrity, centralisation and coordination of law enforcement information at all levels;
- Serving as a hub for law enforcement intelligence and information;
- Providing operational and administrative support to field divisions and extra solar offices;
- Taking the lead within FLEA during times of crisis or emergency, directing major cases and operations.

There are over 15,000 dedicated staff based at Federal Law Enforcement Headquarters, and it is also headquarters for many specialist law enforcement divisions, including:

- Investigations;
- The Behavioural Analysis Unit;
- The Critical Incident Response Group;
- Counter Terrorism Division;
- Tactical Support Division;
- Psychic Crime Investigation.



RDU HEADQUARTERS, LOS ANGELES

Known amongst cops as “the Tower,” the new headquarters is a hulking monstrosity. Always open. Always overwhelmed. Swarming with cops, crooks, and citizens in need. There’s neither a case nor criminal that doesn’t pass through this building at some point, which would explain why the Tower rivals most megastructures in Los Angeles (United Americas). Even still, the lobby floor open to the public often feels like it’s bursting at the seams, with the cacophony and crowds matching the roar of a sports arena during the worst of times.

The new headquarters was constructed in the early 2230s after a major fire nearly took down the old FLEA headquarters back in 2229. Most major RDU divisions sprinted to the Tower the moment the doors opened.

In classic chain of command, the RDU top brass and UEF bureaucrats have exclusively claimed the top floors. They’re normally off-limits, but when a case demands diplomacy or your boss’ boss’ boss needs to shout a few colorful metaphors at you behind closed doors, you’ll take the rare ride up the lift. Among the floors below, you’ll find all a Blade Runner needs for case work, including some RDU advantages found nowhere else, such as the FLEA Mainframe and Denabase, RDU training grounds, V-K and Baseline interrogation rooms, and a reserved Spinner feet.

The FLEA's armory and facilities are technically at your disposal as well, but Blade Runners rarely take advantage. The RDU's armory is special equipped with Blade Runner gear and goodies. Plus, any crime lab without Soco (the RDU's Scene Of Crime Officer) pales in comparison, as his grasp on the vast complexities of Replicants and other regulated tech is unsurpassed. Customizing the RDU's Crime Lab like most Blade Runners once tweaked their V-K briefcases, no crime lab in the system can hold a candle to Soco's kingdom.

Yet truth be told, Blade Runners work and live on the streets, so your time in the Tower is brief and perfunctory at best. Luckily, you can get almost anywhere in the city from the Tower by Spinner in 15 minutes flat. So, while some Blade Runners may aspire to claim one of those top brass corner offices high above, the streets below and the second to last stool at the White Dragon Noodle Bar suit most just fine. And they give extra noodles on the house.

FEDERAL LAW ENFORCEMENT LABORATORIES, MARS

The Federal Law Enforcement Laboratories relocated to Mars from Earth in 2142, during the restructuring of FLEA in the wake of the Colonial Act. Based in Viking City, it serves as the primary laboratory for most DNA, biological and physical forensic work conducted by FLEA. The services of the Federal Law Enforcement Laboratories are used by many local and interstellar federal agencies free of charge. A secondary laboratory is maintained at the Federal Law Enforcement Academy.

FEDERAL LAW ENFORCEMENT ACADEMY, GENEVA

The Federal Law Enforcement Academy, located in Geneva, is home to the central communications and computer laboratory that FLEA utilises. It is also where new recruits are sent for training to become Special Agents. Going through the 22 week course is required by every Special Agent. It was first opened for use in 2104, superseding the facility in Quantico, Virginia. The Academy also serves as a teaching facility for FedPol and ColSec personnel who are regularly invited to the premiere law enforcement training centre.

The FLEA training units based at the Academy include:

- Field Agent and Police Training Centre;
- Firearms Training Centre;
- Forensic Science Research & Training Centre;
- Technology Services Centre;
- Investigative Training Centre;
- Physical Training Centre;
- New Agent Training Centre;
- Federal Marshal Training Centre;
- Analytical Studies College.

KRASOVSKY CORRECTIONAL FACILITY, LUNA FAR SIDE

Krasovsky is an impact crater approximately 50km in diameter on the far side of the Moon from the Earth. Relatively isolated from impact craters of note, Krasovsky is the location of a high-security prison specifically designed by FLEA to hold those criminals with psychic abilities. The prison is almost completely automated, with a small team of android wardens and a tactical team on standby should it be needed. Human personnel stationed at Krasovsky are required to wear Halos (artificial psychic shields) as standard, and prisoners are kept dosed with a cocktail of psychic ability suppressors. The most dangerous prisoners who refuse to cooperate with staff are usually confined to cryosleep.

METASENSORY LAW ENFORCEMENT HEADQUARTERS, WINTERTHUR

Located just outside the Swiss town of Winterthur and more commonly known as the Winterthur Institute, this is where would-be members of the Metasensory Police (MetaPol) train and study, and from where the MetaPol Command direct, organise and coordinate the activities of MetaPol operatives on Earth and throughout the Federal Colonies.

ZENITH SPACE STATION, L4 EARTH ORBIT

By UEF law, all commercial interplanetary and interstellar shipping arriving in the Earth-Lunar system must pass through Orbital Customs & Excise located at Unity Space Station. Here they must strip and be decontaminated (same goes for belongings). Transportation of any undeclared organic substance that is alien in origin is illegal. All such items must pass through ITC Quarantine to make sure it is safe and will not contaminate Earth's biosphere.

The same quarantine laws apply to FLEA personnel, but to expedite matters FLEA have their own transit facility located in L4 Earth orbit. Zenith space station is the orbital headquarters and prime transit facility for FLEA personnel entering/leaving Earth-Lunar territory. Zenith is also administrative centre for all FLEA shipping. From here position and status of all the myriad of interstellar law enforcement craft is logged and continually updated, from the large patrol corvettes and transports down to smaller patrol cutters. FLEA has its own FTL transmitter at Zenith, allowing them to broadcast information over interstellar distances without being hindered by commercial traffic.

Recruitment Procedure And Training

FLEA has adopted minimum-standard standardised training requirements for all officers with powers of arrest within the Federal Colonies. Many standards apply to inservice training as well as entry-level training, particularly in the use of firearms, with periodic re-certification required. Though recruitment procedures may vary slightly from region to region, these standards typically require that potential recruits:

- Be in good physical and psychological condition;
- Maintain a clean criminal record without either serious or repeated misdemeanour or any felony convictions;
- Not have a history of prior narcotic or repeated marijuana use or alcoholism;
- Not have a history of ethical, professional, vehicle, or financial improprieties;
- Not have a history of domestic violence or mental illness;
- Be legally eligible to own and carry a firearm.

Repeated interviews, written tests, medical examinations, physical fitness tests, comprehensive background investigations, fingerprinting, a polygraph examination and consultation with a psychologist are common practices used to review the suitability of candidates.

Recruiting in most departments is competitive, with more suitable and desirable candidates accepted over lesser ones, and failure to meet some minimum standards disqualifying a candidate entirely. Departments maintain records of past applicants under review, and refer to them in the case of either reapplication or requests from other agencies.

FEDPOL/COLSEC

In a civilisation as dispersed as that of the United Earth Federation (UEF), the enforcement of law requires a special breed of men and women to police remote colonial settlements light years away from anywhere, and maintain the security of the spacelanes and trade routes.

Alongside the highest aspirations and ideals of humanity that left Earth to begin the colonisation of space there travelled the criminal, the dangerous and the malevolent. To combat these rogue elements in the colonies the UEF have created the Colonial Security Force (ColSec). ColSec, under the mandates of the Federal Law Enforcement Authority (FLEA) have been charged with the day to day security of colonies of the UEF. Policing the colonies is a tangled nightmare of logistics, poor communications between systems, local politics and a constant arms race between criminals and the police. Despite these problems ColSec has been remarkably successful in bringing UEF law to the colonies.



ColSec has suffered in recent years from bad publicity as a result of accusations of brutality and some high profile corruption cases. Responding to public, media and political pressure the UEF Senate instigated the Colonial Policing Charter of 2265. The charter was greeted by ColSec, and many colonial governments, with mixed feelings; many felt it was typical of a UEF centralist approach hijacking real colonial issues for political ends. The Charter involved the re-organization of ColSec hierarchy and a tightening up of arrest and trial procedures. These changes have caused some tensions within ColSec and have attracted criticism from colonial media.

Training

Due to resource restrictions very few colonies can afford to run and staff a police training academy. Most recruitment is done either from the Core Systems, and police officers are shipped out to the smaller outer rim colonies.

FedPol/ColSec is seen as one of those jobs that allows someone to get out into space. However some critics have argued this is a policy of making sure that many police officers come from the core worlds rather than the colonies themselves. In response to this criticism the police charter has made it easier for a civilian from a particular colony to be shipped to a colony with a police academy.

All FedPol/ColSec officers are expected to maintain a certain level of fitness and keep their firearm skills sharp. Even the smallest FedPol/ColSec stations will have an extensive gym and firing range.

Just before the colonial wars there was a shortfall in recruitment, however after the colonial wars, there was a drive to recruit many de-mobbed marines into FedPol/ColSec. The initiative was largely successful and many ex marines can be found filling the ranks of FedPol/ColSec and this is still a popular career choice for marines who have just left the forces. The skills that marines can bring to FedPol/ColSec are highly valued.

Successful applicants to become uniform officers in FedPol or ColSec must undergo a 30 week training course at one of the training academies that are located at the larger colonies in the Core Systems. Training is free and Trainee Officers are paid their full starting salary during training.

Much of the training occurs in the classroom. Officers learn law, human relations, languages and report writing. Officers are also trained in tactics, firearms and vehicle handling. Physical fitness and self-defence training plays a big part in the Academy.

Occupation Templates

The following occupation templates are provided for Game Masters wishing to generate player characters who are uniformed officers in either FedPol or ColSec:

Uniformed Officer

- Requisites: STR/10+; INT/10+
- Occupation Skills:
 - Computer (Operation), Data Analysis, Dodge, First Aid, Gun Combat (Hand Gun, Shotgun), Law, Listen, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties.
- Background:

E\$15,000pa salary; 2x police contacts (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession; rented accommodation.

Special Firearms Unit (SFU) Officer

- Requisites: STR/12+; INT/12+
- Occupation Skills:

Dodge, First Aid, Gun Combat (Hand Gun, Rifle, players choice), Law, Listen, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit. Vehicle plus two other skills as personal specialties.
- Background:

E\$18,000pa salary; 2x police contacts (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession; rented accommodation.

Pilot

- Requisites: INT/12+; DEX/12+
- Occupation Skills:

Computer (Operation), Data Analysis, First Aid, Gun Combat (Hand Gun), Law, Listen, Pilot (Aerospace) Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties.

■ Background:

E\$25,000pa salary; 1x police contact (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession; rented accommodation.

Investigations Officer

■ Requisites: STR/10+; INT/12+

■ Occupation Skills:

Administration, Computer (Operation), Data Analysis, Dodge, Gun Combat (Hand Gun), Hide, Law, Listen, Spot Hidden, Search, Streetwise, Vacc Suit, Vehicle plus two other skills as personal specialties.

■ Background:

E\$20,000pa salary; 2x police contacts (Game Master's discretion); E\$1000x1d10 savings; personal items related to profession; rented accommodation.

Scene Of Crime Officer (SOCO)

■ Requisites: STR/10+; INT/12+

■ Occupation Skills:

Administration, Computer (Operation), Data Analysis, First Aid, Medicine, Gun Combat (Hand Gun), Law, Listen, Spot Hidden, Search, Streetwise, Vacc Suit, Vehicle plus two other skills as personal specialties.

■ Background:

E\$20,000pa salary; 2x police contacts (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession; rented accommodation.

Undercover Officer

■ Requisites: STR/10+; INT/10+; BRA/12+

■ Occupation Skills:

Bargain, Computer (Operation), Data Analysis, Dodge, Fast Talk, Gun Combat (Hand Gun), Hide, Law, Listen, Spot Hidden, Search, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties.

■ Background:

E\$25,000pa salary; 4x police contacts (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession; rented accommodation.

Equipment

The FedPol/ColSec uniform is black in colour, with the only differentiation between the two is the badge. Officers tend not to wear the full police body armour unless there is a need for it. However most will wear a thin armoured vest under their white shirt. The shirt is collarless, and they wear no ties. The shirt has either the FedPol or ColSec badge on both arms. A black baseball type cap with the badge on it is also worn, and a black bomberjacket with either FedPol or ColSec in reflective white on the back. Hair is recommend to be cut short, however those that decline to do so must tie their hair back while on duty.

All officers are issued with a standard Personal Data Assistant (PDA) and it is their constant companion. The PDA is about the size of a small paperback book and weighs 250 grams.

Most of the unit is a high resolution view screen with touch activated graphic user interface and limited voice recognition capacity. A small stylus is included in the design of the case for use in making notations on the screen.

The PDA can securely access police networks via wireless or wired connection (it has a 1km wireless range under optimum conditions). It has a 100 gigabyte storage capacity and the main function is in the transmission and receiving of informational data, work schedules, and captured evidence video streams. It can also display maps and schematics in high-definition format and can be used to download and store vital information on local conditions. The PDA has a shock-proof case constructed of toughened plastics and is waterproof to a depth of 100m.

All uniformed officers now wear Azumi Smart Systems SmartSpecs™ as standard while on duty. These glasses are wirelessly connected to the standard police issue PDA, and have integral Augmented Reality overlays, allowing officers access to a wealth of online information wirelessly. This can include local maps, informational database records, scene of crime information logged by other officers and relevant evidence logs. In addition officers can call up data on citizens with

Personal Data Transmitters. SmartSpecs™ also have a built in digital camera, allowing officers to capture visual information. It is common for officers to leave this camera running while attending a call in an environment with high wireless coverage. Captured footage can then be streamed directly to a secure police data repository. When away from good wireless coverage, the SmartSpecs™ can buffer up to an hour of high definition video if required.

Weapons:

All police are issued with a standard M11P 10mm automatic pistol and at least two spare magazines. They also carry a stun baton and a pair of auto-seal cuffs. A shotgun or riot gun is usually kept in a bio-locked box in the car cabin.

Special Firearms Unit officers are more heavily armoured than normal patrol officers and use military issue firearms. The SFU also make use of custom built suborbital transports which are armoured and have a 12.7mm minigun as well as gas rockets. In domed or sealed colonies they often use a custom built and heavily armoured ground carrier.

Investigations Officers often carry nonstandard weapons as backups to the department issued firearms.

Ground Transport:

The police ground car is a Chrysler V15. It has lightly armoured frame and plexi-glass screens. FedPol/ColSec vehicle colours are a traditional black and white colour. The car boot often contains cutting tools, medical supplies and spare items of equipment. Each car has an onboard computer and can access the trafcom system.

Riot Gear:

Riots do occur on colonies from time to time and FedPol/ColSec have a variety of ways of dealing with the problem. If a colony is a closed environment they may automatically seal of the area to contain the threat and send in the riot police, or simply pump in gas to stun the rioters.

A patrol officer may be expected to act as a riot control officer should the need arise. They are then issued with Riot Armour with breathing apparatus to protect against noxious substances, and are armed with stun batons and riot shields. They use the locked shield tactics as with support from armoured vehicles that can use riot foam or stun gas.

FedPol/ColSec officers on riot duty have access to heavier weapons should they be needed such as Taser pistols, shock rifles and baton-loaded shotguns.



SPECIAL INVESTIGATIONS AGENCY

Training

After potential special agent candidates are cleared and the standard FLEA non-disclosure agreement is signed, they attend the SIA training facility located at the Federal Law Enforcement Academy in Geneva. Candidates spend approximately 22 weeks at the academy, where they receive over 500 classroom hours and over 1000 simulated law enforcement hours to train. Upon graduation, new Special Agents are placed throughout the Federal Colonies, depending on their areas of expertise. Any Agent or Support staff member can be transferred to any location for any length of time if their skills are deemed necessary at one of the SIA field offices.

Occupation Templates

The following occupation templates are provided for Game Masters wishing to generate player characters who are SIA employees

Field Agent

- Requisites: STR/10+; DEX/10+; INT/12+
Must have minimum 30% in Administration, Law, Gun Combat (Pistol) when character generated.
- Occupation Skills:

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- Administration, Computer (Operation), Data Analysis, Dodge, Gun Combat (Hand Gun), Law, Listen, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus three other skills as personal specialties from: Electronics, Fast Talk, First Aid, Psychology, Sciences, Gun Combat (Player choice), Languages.
- Background:
E\$25,000pa salary; 2x police contacts (Game Master's discretion); E\$1000x1d10 savings; personal items related to profession; rented accommodation.

Analyst

- Requisites: STR/10+; DEX/10+; INT/14+
Must have minimum 30% in Administration, Data Analysis, Law, when character generated. Speciality must have a minimum of 50%.
- Occupation Skills:
- Administration, Computer (Operation), Data Analysis, Gun Combat (Hand Gun), Law, Spot Hidden, Vacc Suit, Vehicle plus three other skills as personal specialties.
- Background:
E\$25,000pa salary; 2x police contacts (Game Master's discretion); E\$1000x1d10 savings; personal items related to profession; rented accommodation.

Forensic Investigator

- Requisites: STR/10+; DEX/10+; INT/14+
Must have minimum 30% in Administration, Data Analysis, Medicine, when character generated. Must have a minimum of 60% in their chosen Forensic field.
- Occupation Skills:
- Administration, Computer (Operation), Data Analysis, Devise, Medical (First Aid, Medicine, Forensics), Gun Combat (Hand Gun), Law, Pharmacy, Science (Biology, Chemistry), Spot Hidden, plus three other skills as personal specialties.
- Background:
E\$30,000pa salary; 1x police contact (Game Master's discretion); E\$1000x1d10 savings; personal items related to profession; rented accommodation.

Equipment

In addition to any personal equipment, all Special Agents are issued with the following field kit as standard:

- Personal Body Armour;
- M11P Automatic Pistol;
- 5x magazines of ammunition;
- Weapon Licence;
- PDA;
- ID Card;
- The ubiquitous FLEA credit card (expenses must be accounted for!);
- 2x sets of wristlocks;
- Stun Baton;
- Basic med kit;
- Comms equipment short/med range;
- Translator;
- Torch;
- Low light vision gear/binoculars;
- Basic tool kit (screwdrivers etc might need to take a few things apart);



NEW HORIZON, core rules 6.2 – volume 2

- Locator Device (allowing all team members to be tracked if needed);
- Cool sunglasses;

SIA Forensics Investigators in the field are issued with a standard Crime Scene Investigation Kit as follows:

- Bio-Sniffer a PDA sized device capable of detecting trace amounts of chemical and biological agents, narcotics etc;
- Barricade Tape;
- Onsite IDent Kit – a PDA sized device capable of comparing iris patterns or DNA samples against a pre-loaded database or uploading to match against local personnel/criminal databases if available;
- Laser Trajectory Kit;
- Evidence Handling Gloves;
- Evidence Bags;
- Evidence Boxes;
- Evidence Tape;
- Crime Scene Suit – a jumpsuit designed to prevent crime scene contamination – it has airtight collars and cuffs, hood, breath-mask and antistatic coating;
- Crime Scene Tools (scissors, scalpels etc);
- Gunshot Residue Test Kits;
- DNA and Blood Evidence collection;
- Multi-band forensic light (for detecting presence of blood stains, body fluids stains, narcotics);

FEDERAL MARSHALS

Training

Federal Marshals Service Basic Training is conducted at the Federal Law Enforcement Academy, Geneva. Currently, basic training for new Deputies consists of a 17 week course that includes:

- Legal Training
- Firearms Training
- Defensive Tactics
- Physical Conditioning
- Driver Training
- First Aid
- Courtroom Evidence & Procedure
- Prisoner Search & Restraint
- Court Security
- Computer Training
- Officer Survival
- Building Entry & Search
- Search and Seizure
- High Threat Trials
- Protective Service Training
- Surveillance

Understanding of subject matter is measured by a series of four exams spanning the entire training program. Students must successfully pass each exam with a minimum score of 70%. Additionally, students participate in practical exercises in which they must demonstrate an understanding of concepts learned.

Once training is complete, those who pass become Deputy Federal Marshals, and immediately receive their initial assignment. Most new Marshals undergo a six month probationary period during which they are partnered with a fully qualified Marshal.

Occupation Templates

The following occupation templates are provided for Game Masters wishing to generate player characters who are Federal Marshals:

Deputy Federal Marshal

- Requisites: STR/10+; INT/10+
- Occupation Skills:
Computer (Operation), Data Analysis, Dodge, EVA, First Aid, Gun Combat (Hand Gun, Shotgun), Law, Listen, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties.
- Background:
E\$15,000pa salary; E\$1000x1d4 savings; personal items related to profession.

Federal Marshal

- Requisites: STR/10+; INT/10+
- Occupation Skills:
Administration, Computer (Operation), Data Analysis, Dodge, EVA, Fast Talk, First Aid, Gun Combat (Hand Gun, Shotgun), Law, Listen, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties.
- Background:
E\$20,000pa salary; 2x contacts (Game Master's discretion); E\$1000x1d10 savings; personal items related to profession.

Equipment

The uniform of the Federal Marshals Service is dark green. Equipment and weapons are the same issue as for FedPol/ColSec uniform officers.

METAPOL

Training

MetaPol recruitment officers are trained to spot potential candidates for a career in Federal Law Enforcement as they tour the many branches of the Metasensory Academy, talking to the final year students and promoting the role of MetaPol. Psychics with unstable personalities or of a nervous disposition can suffer severe mental trauma from a career in MetaPol, and as such must be screened out as early in the application process as possible.

Successful applicants enter the MetaPol training programme at the Winterthur Institute, which lasts 40 weeks and culminates with the Deputy Field Operatives being assigned to partner a fully-qualified MetaPol Operative for a six month probationary period during which time they have regular progress assessments.

Once this period is up, the Deputy Field Operative attends one final assessment. If they pass, they earn the right to wear the MetaPol badge and are sent on their first solo assignment.

Occupation Templates

The following occupation templates are provided for Game Masters wishing to generate player characters who are MetaPol Operatives:

Deputy Field Operative

- Requisites: STR/10+; INT/10+ POW/13+
- Occupation Skills:

Computer (Operation), Data Analysis, Dodge, Fast Talk, First Aid, Gun Combat (Hand Gun), Law, Psychology, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties, Psychic Abilities (see Psionic Talents' section).

■ **Background:**

E\$15,000pa salary; psychic registration card; 2x police contacts (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession.

Field Operative

■ **Requisites:** STR/10+; INT/10+; POW/15+

■ **Occupation Skills:**

■ Administration, Computer (Operation), Data Analysis, Dodge, Fast Talk, First Aid, Gun Combat (Hand Gun), Interrogation, Law, Psychology, Search, Spot Hidden, Streetwise, Unarmed Combat, Vacc Suit, Vehicle plus two other skills as personal specialties, Psychic Abilities (see Psionic Talents' section).

■ **Background:**

E\$20,000pa salary; psychic registration card; 2x police contacts (Game Master's discretion); E\$1000x1d4 savings; personal items related to profession.

Equipment

MetaPol Field Operatives do not have a standard uniform, but there is a dress code: while on field assignment all operatives are required to wear smart business attire of a dark colour. The MetaPol badge should be worn somewhere on their person unless circumstances decree otherwise. Black gloves are optional, though aid in intimidating suspects.

All Field Operatives are trained and issued with the standard FLEA sidearm: an M11-P 10mm automatic pistol. They also often carry a stun baton and at least one pair of auto-seal cuffs.

Space Assets

The majority of FLEA space assets are designed for in-system police work rather than interstellar travel. Though FLEA maintains a small fleet of interstellar vessels, these are transports or fast couriers rather than warships. See the rules expansion The Final Frontier for an explanation about ship statistics.

CUTTER

Fast, lightly armed vessels used chiefly for orbital interception, in-system patrol work and transportation of small teams of personnel, Cutters are the standard light enforcement vehicle (LEV) employed by FLEA. They require only one crew (the pilot) and can carry up to 8 passengers, albeit in cramped conditions.

General Characteristics

Primary Function:	Interception/patrol
Contractor:	Varies
Power Plant:	Fusion
Propulsion	
Orbital:	Fusion rockets
Length:	25 metres
Height:	6.2 metres
Beam:	14.1 metres
Max Velocity	
Orbital:	2.8g
Max Payload:	1 ton
Cargo Configurations:	Patrol: 8 uniform officers Search & Rescue: 3 Paramedics, room for 5 passengers.
Crew:	1 (pilot)
Sensors	
Space: Passive	5000km
Space: Active	3000km
Perimeter Alert:	50,000km
Comm Range:	5000km

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Standard Weapon Systems:	1x 25mm Chain Cannon. 2x AGM-204A Threat Suppression Attack Missile 4x AIM-90E Headlock Smart Missile
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Game Stats

Velocity: Cruise	07
: Full Thrust	14
Manoeuvre:	2 (+2%)
Autopilot:	50%
Battle Computer:	1
Initiative Modifier:	1
Stealth:	1
ECM:	0
Fire Control:	1
Armor Value:	12

CORVETTE

The FLEA corvette is a medium-enforcement vehicle (MEV), twice as large as a cutter and equipped with armament capable of engaging hostile vessels at ranges of up to 250km.

Corvettes perform missions such as rendering aid to people and property in distress in deep space, protecting colonial assets and orbital facilities, and stopping and boarding vessels suspected of violating ITC quarantine laws. Corvettes are also used to enforce federal laws in star systems under UEF jurisdiction. A Corvette has a crew of 2 (pilot, co-pilot/weapons officer) and can carry up to 15 passengers, albeit in cramped conditions.

General Characteristics

Primary Function:	In system patrol craft
Contractor:	Varies
Power Plant:	Fusion
Propulsion	
Orbital:	Fusion rockets
Length:	48 metres
Height:	12.2 metres
Beam:	21.4 metres
Max Velocity	
Orbital:	2g
Max Payload:	10 tons
Cargo Configurations:	Patrol: 15 uniform officers Search & Rescue: 3 Paramedics, room for 12 passengers.
Crew:	3 (pilot /co-pilot-navigator/engineer)
Sensors	
Space: Passive	5000km
Space: Active	3000km
Perimeter Alert:	50,000km
Comm Range:	5000km
Standard Weapon Systems:	2x VRF Gauss Cannons; 2x AGM-204A Threat Suppression Attack Missile 4x AIM-90E Headlock Smart Missile 4x ASAT-100 Predators

Game Stats

Velocity: Cruise	06
: Full Thrust	12
Manoeuvre:	2 (+2%)
Autopilot:	50%
Battle Computer:	1
Initiative Modifier:	1
Stealth:	1
ECM:	1
Fire Control:	1
Armor Value:	20

DEEP SYSTEM CRUISER

The FLEA deep system cruiser is a heavy enforcement vehicle (HEV), more than twice as large again as a corvette and packing almost military grade armament capable of engaging enemy vessels at ranges up to 1000km.

A midnight black wedge fully 110 metres long, the deep system cruiser is the heaviest vessel deployed by FLEA for law enforcement work. It is used for aggressive policing missions, and raids against criminal strongholds outside of the usual planetary environments, where the threat is deemed manageable without the need for support from colonial marine units.

General Characteristics

Primary Function:	Deep system operations craft
Contractor:	Varies
Power Plant:	Fusion
Propulsion	
Orbital:	Fusion rockets
Length:	110 metres
Height:	18.6 metres
Beam:	38.1 metres
Max Velocity	
Orbital:	2g
Max Payload:	100 tons
Cargo Configurations:	The deep system cruiser can carry up to 60 passengers.
Crew:	4 (pilot /co-pilot-navigator/engineer/weapons officer)
Sensors	
Space: Passive	5000km
Space: Active	3000km
Perimeter Alert:	50,000km
Comm Range:	5000km
Standard Weapon Systems:	2x VRF Gauss Cannons; 2x 30mm rail cannons; 8x ASAT-100 Predators 4x ASAT-120 Balmungs

Game Stats

Velocity: Cruise	06
: Full Thrust	10
Manoeuvre:	1 (+1%)
Autopilot:	50%
Battle Computer:	2
Initiative Modifier:	1
Stealth:	0
ECM:	2
Fire Control:	1
Armor Value:	26

Criminal Law And Sentencing Guidelines

This appendix may be used by Game Masters and Players to determine a suitable sentence for arrested suspects, be it time spent incarcerated, a fine or some other punishment. Players are free to consult this appendix at any time during play in order to access this guide, or they may make a Knowledge (Law) check at in order to recall a suitable sentence for any crime.

INTRODUCTION

Criminal law (also known as penal law) is the body of statutory and common law that deals with crime and the legal punishment of criminal offences. There are four theories of criminal justice: punishment, deterrence, incapacitation, and rehabilitation. It is believed that imposing sanctions for the crime, society can achieve justice and a peaceable social order. This differs from civil law in that civil actions are disputes between two parties that are not of significant public concern.

Anyone in United Earth Federation (UEF) territory who commits a crime as defined in the Geneva Statute of 2084 (Criminal Law, as amended by the Colonial Act of 2140), is liable for arrest and prosecution by a branch of the Federal

Law Enforcement Authority (FLEA). Once an individual has been found guilty, sentencing is usually quick and efficient. There are two major categories of crime as defined by the Geneva Statute:

Misdemeanour

A misdemeanour is a petty or lesser criminal violation of the law considered less serious than a felony. Examples include littering, minor traffic violations, late payment of fees, and building code violations. Misdemeanours do not usually carry a custodial sentence.

Felony

In the UEF, a felony is one of the highest types of offences. It is a crime punishable by one or more years of imprisonment, and regarded as more serious than a misdemeanour. UEF

Criminal Law is split into the following sub-categories:

1. CRIMES AGAINST THE PERSON

Assault

Defined by FLEA as an attempt to cause or purposely, knowingly, or recklessly causing bodily injury to another; or negligently causing bodily injury to another with a deadly weapon.

- **1st Degree Assault**

Wounding as a result of an intention to kill. Also called Attempted Murder.

Standard Sentence: 10 years.

Parole: 5 years.

- **2nd Degree Assault**

Wounding as a result of wilful intent to harm, rather than kill. (Broken bottle in a bar brawl). Also referred to as Aggravated Assault.

Standard Sentence: 3 years.

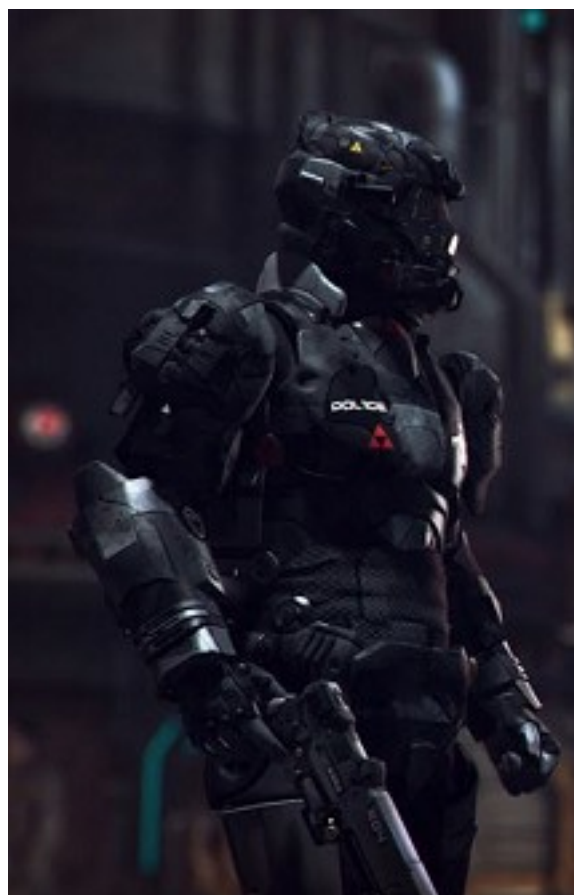
Parole: 18 months.

- **3rd Degree Assault**

Accidental wounding as a result of negligence, or an intent to harm someone else. However someone getting shot, but not killed, in crossfire is classed as 1st degree assault.

Standard Sentence: 2 years.

Parole: 12 months.



Extortion

Obtaining money or property from another through coercion or intimidation or threatening physical harm unless paid money or property.

Standard Sentence: 20 years.

Parole: 10 years.

Harassment

Harassment refers to a wide spectrum of offensive behaviour. When the term is used in a legal sense it refers to behaviours that are found threatening or disturbing, and beyond those that are sanctioned by society.

Categories of harassment often recognized in this law include: legal harassment, sexual harassment, psychological harassment and hate speech.

Standard Sentence: 3-5 years.

Parole: 18 months.

Kidnapping

Any illegal capture or detention of persons against their will, regardless of age, usually for ransom. During time of war, enemy soldiers may be captured in another state's territory and detained as prisoners of war under the law of the capturer's state. Suspected war criminals and those suspected of genocide or crimes against humanity may also be arrested.

Standard Sentence: 10-15 years.

Parole: 6-8 years.

Identity Theft

Identify theft is wrongfully impersonating someone, typically for financial gain either by exploiting the reputation of the subject person or stealing from him/her.

■ 1st Degree Identity Theft

Theft of identity used to enable illegal immigration, terrorism or espionage. It may also be a means of blackmail if activities undertaken by the thief in the name of the victim would have serious consequences for the victim.

Standard Sentence: 6-20 years plus E\$10,000 fine.

Parole: 3-10 years.

■ 2nd Degree Identity Theft

Most common form of this law, relating to credit and debit card fraud although other kinds of financial fraud are common.

Standard Sentence: 2-8 years plus E\$10,000 fine.

Parole: 12 months to 4 years.

■ Corporate Manslaughter

Corporate manslaughter is an act of homicide committed by a company. This includes the disregard for the health and safety of employees which results in deaths, and gross negligence in duty of care. Obviously a company cannot be imprisoned, but the penalty if found guilty is an unlimited fine. In addition, FLEA may arrest and attempt to prosecute senior managers directly connected with the deaths with 4 th Degree Murder (see later).

Murder

■ 1st Degree Murder

Defined as the planning in cold blood the murder of someone, and being involved in the planning. The sentence for 1 st degree murder is Life. A judge may decide that Life means Life if the case is particularly horrific murder.

Standard Sentence: 25 years minimum to life.

Parole: 20 years minimum.

■ 2nd Degree Murder

Acts of murder as a result of anger, accidental shooting in a robbery etc.

Standard Sentence: 20-25 years.

Parole: 15 years minimum.

■ 3rd Degree Murder

Incidentally involved in acts that allowed a murder to take place. (Not just the planning, or willingly provided data or access to a site knowing someone was about to commit a crime.

Standard Sentence: 15-20 years.

Parole: 10 years minimum.

■ 4th Degree Murder

Out in space life is hard and no one wants to die as a result of someone else's stupidity or vandalism. So 4th degree murder is essentially death by someone doing something stupid. i.e. a drunk miner out in space "fooling" around with laser cutters who ended up killing a fellow miner. This section also includes individuals prosecuted as part of a corporate manslaughter case.

Standard Sentence: 5-8 years.

Parole: 3 years.

Rape

■ 1st Degree Rape

Any action of forced sex, including the use of drugs is considered rape. There is also no distinction between male or female rape. Sex with a minor (an individual who is under 16 years of age Earth Standard Time) is also 1st degree rape. FLEA officers usually charge for 2nd degree assault as well, unless they can prove the rapist intended to kill the victim afterwards then it becomes 1st degree. See stacking later.

Standard Sentence: 12 to 18 years. Repeat offenders may face mandatory Behavioural Alteration under Clause 404 of the Geneva Statute.

Parole: 8-10 years pending psychological examination.

■ 2nd Degree Rape

Inappropriate touching and acts of non penetrative sex.

Standard Sentence: 10-15 years.

Parole: 5-8 years.

■ 3rd Degree Rape

Taking unlawful picture of minors Using someone else's image without consent in pornographic pictures or holographic acts.

Standard Sentence: 10 years.

Parole: 5 years.

Robbery

Robbery is the crime of seizing property through violence or intimidation. A perpetrator of a robbery is a robber. Violence is an ingredient of most robberies, and its use sometimes results in the murder of the victim(s). The element of force differentiates robbery from burglary, embezzlement, larceny, and other types of theft. Piracy is classified as a form of robbery.

■ 1st Degree Robbery

Armed robbery with violence. Usually includes large scale crimes such as bank jobs, hijacking of ships etc and cons of over a E\$50k in value. Piracy is classified as 1 st Degree Robbery.

Standard Sentence: 20 years, though maximum sentence is life.

Parole: 15 years.

■ 2nd Degree Robbery

Armed robbery involving the threat of violence. This usually includes car-jacking.

Standard Sentence: The maximum penalty for 2 nd Degree Robbery is 14 years.

■ 3rd Degree Robbery

This covers crimes such as looting and street mugging.

Standard Sentence: Judges discretion, though a third offence of 3 rd Degree Robbery carries a minimum 18 month custodial sentence.

2. CRIMES AGAINST PROPERTY

Arson

Arson is the crime of setting a fire for an unlawful or improper purpose. Arsonists' motives vary from vandalism to mental illness.

- **1 st Degree Arson**

Defined as the setting of fires with the intent to cause loss of life.

Standard Sentence: Life.

Parole: 20 years minimum.

- **2nd Degree Arson**

Defined as the setting of fires with the intent to cause damage to property.

Standard Sentence: 10 years.

Parole: 8 years minimum.



Blackmail

The act of threatening to reveal information about a person unless the victim fulfils certain demands. This information is usually of an embarrassing or socially damaging nature. In a broader sense, blackmail is an offer to refrain from any action which would be legal or normally allowed, and is thus distinguished from extortion.

Standard Sentence: Judges discretion, though the maximum sentence is life.

Burglary

Also called breaking and entering, burglary is a crime related to theft. It typically involves someone breaking into a house with intent to commit a crime.

Standard Sentence: Minimum recommended sentence is 5 years, with a maximum of 10 years for a non-dwelling and 14 years for a dwelling. If the criminal carries a weapon while committing the crime, it becomes Aggravated Burglary, for which the minimum sentence is 10 years and maximum is Life.

Fraud

Fraud permeates many areas of life, including art, archaeology and science. In the broad legal sense a fraud is any crime or civil wrong for gain that utilises some deception practiced on the victim as its principal method.

Standard Sentence: 5-10 years.

Handling

Handling takes place after a theft is completed and is usually committed by a professional Fence or other person who helps the thief to realise the value of the stolen goods.

- **1st Degree**

Chopping and chiselling. Selling. Using stolen data to provide assistance to criminals. Creating illegal goods.

Standard Sentence: 15 to 18 years.

- **2nd Degree**

Passing on or altering stolen goods for resale into conventional market.

Standard Sentence: 10 years.

- **3rd Degree**

Knowingly receiving stolen goods/illegal items. Standard Sentence: 5 to 8 months.

Net Crime

This is a term used broadly to describe criminal activity in which computers or networks are a tool, a target, or a place of criminal activity. This term is also used to include traditional crimes in which computers or networks are used to enable the illicit activity. The Net Crime Bill has three main subsections:

- Subsection 1 of the Net Crime Bill covers those crimes in which the computer or network is a tool of the criminal activity, including data piracy.
- Subsection 2 of the Net Crime Bill covers those crimes in which the computer or network is a target of criminal activity includes unauthorised access (i.e. hacking), malicious code, and denial-of-service attacks.
- Finally Subsection 3 of the Net Crime Bill covers traditional crimes facilitated through the use of computers or networks such as identity theft, illegal pornography, fraud, embezzlement etc.

Standard Sentence: Judges discretion, though a minimum 2 year sentence for any of the above crimes is recommended. A conviction for Net Crime is usually combined with a standard conviction for crimes such as blackmail, fraud, identity theft etc.

Slavery

Slavery is the trading of captives or prisoners, who are considered as property, for the purpose of providing labour and services for the owner or state without the right of the slave to refuse, leave or gain compensation beyond room, board and clothing.

Although slavery is illegal and has been for centuries, this does not mean that it ceased to exist. There are many people throughout the Federal Colonies and beyond who live in conditions of virtual slavery, as well as in various forms of servitude which are in many respects similar to slavery. Slavery has become big business for some criminal organisations.

Standard Sentence: 10 years.

Theft

Also known as stealing, theft is the illegal taking of someone else's property without that person's freely-given consent. As a term, it is used as shorthand for all major crimes against property, encompassing offences such, embezzlement, trespassing, pick-pocketing and shoplifting.

Standard Sentence: Judges discretion, though a third offence of 3rd Degree Robbery carries a minimum 18 month custodial sentence.

Vandalism

Vandalism is the conspicuous defacement or destruction of a structure, a symbol or anything else that goes against the will of the owner/governing body.

Standard Sentence: Usually up to 3 years.

3. CONTRABAND CRIME

Possession Of Illegal Substances

This is the crime of having one or more illegal substances in one's possession, either for personal use, distribution, sale or otherwise. Illegal substances fall into different categories and sentences vary depending on the amount, type of substance, circumstances, jurisdiction and political influence of the possessor (and their family). This crime also covers smuggling. Standard Sentence: Judges discretion, though interplanetary smuggling of contraband goods, especially to/from separatist colonies has a minimum sentence of 5 years.

4. CRIMES AGAINST THE STATE

Tax Evasion

This crime usually involves citizens of the UEF deliberately misrepresenting or concealing the true state of their affairs to the tax authorities to reduce their tax liability, and includes, in particular, dishonest tax reporting (such as declaring less income, profits or gains than actually earned; or overstating deductions).

This crime also covers avoidance of paying duties on interstellar-traded goods. Standard Sentence: Fine up to E\$100,000 and up to 5 years in prison.

Espionage

Espionage is the practice of obtaining information that is considered secret or confidential (spying) without the permission of the holder of the information. Espionage is usually thought of as part of an institutional effort (i.e., governmental or corporate espionage). The term espionage is most readily associated with state spying on potential or actual enemies, primarily for military purposes, but this has been extended to spying involving corporations, known specifically as industrial espionage.

Standard Sentence: 10-20 years.

Illegal immigration

This crime refers to the immigration of people across established ICA colonial administrative borders in a way that violates the immigration laws in place for the destined colony world.

Standard Sentence: Illegal immigrants are held at ICA or corporate detention centres until their cases can be reviewed. Many are deported back to point of origin as soon as there is an available cryosleep berth on a transport ship.

Illegal Importation/Exportation

In addition to enforcing the export of trade goods to the disputed Herculis Cluster and Outer Rim, the Interstellar Trade Commission (ITC) enforces quarantine laws strictly, especially since the Ngano Plague of 2250. In the wake of the plague, new laws were brought into effect, making it illegal for any interstellar vessel to enter the Core Systems without first passing through ITC quarantine.

Standard Sentence: 5-10 years.

Smuggling

Smuggling, or trafficking, is illegal transport, in particular across a border. Taxes are avoided; or the goods themselves are illegal for unlicensed possession; or people are transported to a place where they are not allowed to be. Smugglers are generally prosecuted under Illegal Importation/ Exportation laws and Tax Evasion laws.

Treason

A person who betrays the nation of their citizenship and/or reneges on an oath of loyalty and in some way wilfully cooperates with an enemy, is considered to have committed treason and to be a traitor.

Standard Sentence: 20 years to Life.



5. CRIMES AGAINST JUSTICE

Bribery

Bribery is a crime implying a sum or gift given alters the behaviour of the person in ways not consistent with the duties of that person.

Standard Sentence: Judges discretion.

Obstruction

Interfering in a FLEA investigation, altering or destroying evidence, lying during questioning – these are all considered as obstruction of justice.

Standard Sentence: 3-5 years.

Perjury

This is the act of lying or making verifiably false statements on a material matter under affirmation in a court of law or in any of various sworn statements in writing.

Standard Sentence: 3-5 years.

6. SCIENTIFIC/TECHNOLOGY CRIME

Illegal Experimentation

This usually involves illegal experimentation on human subjects against their will.

Standard Sentence: Minimum 10 years.

Unauthorised Possession Of Alien Items

In accordance with the Colonial Act of 2140, upon discovering evidence of intelligent extraterrestrial life, the find must immediately be reported to the UEF, either directly or via an ICA representative. Any physical and intellectual evidence defaults to become property of the United Earth Federation as soon as it is reported. Failure to report such a find is illegal. Possession of alien items without the permission of the UEF government is also illegal.

Standard Sentence: 10 years.

Illegal Cloning

Cloning is the process of creating an identical copy of an original organism or thing. A cloning in the biological sense, therefore, is a molecule, single cell (like bacteria, lymphocytes etc.) or multi-cellular organism that has been directly copied from and is therefore genetically identical to another living organism.

Many types of cloning are perfectly legal in the 23rd Century. These include:

- Molecular Cloning which is the isolating and replication of DNA sequences in the treatment of genetic illnesses;
- Agricultural Cloning to isolate desirable plant strains for use on marginal worlds;
- Flash Cloning, the cloning of organs for transplantation surgery;
- Reproductive Cloning, the technology used to generate an animal that has the same nuclear DNA as another currently or previously existing animal. Very useful for cloning animals on distant colony worlds.

Those types that are illegal are detailed below:

- **1st Degree Illegal Cloning**

This law covers Human cloning. Human cloning is the creation of a genetically identical copy of an existing, or previously existing human, by growing cloned tissue from that individual. The term is generally used to refer to artificial human cloning; human clones in the form of identical twins are commonplace, with their cloning

occurring during the natural process of reproduction. Human cloning was made illegal by the Eckerley ruling of 2086.

Standard Sentence: 10 years.

■ **2 nd Degree Illegal Cloning**

Flash Cloning is still an expensive business and requires a Federal Health Service license. As a result criminal elements offer an alternative: cheaply cloned organs that on many occasions have imperfections that can cause organ failure or other complications.

Standard Sentence: 3-5 years.

Removing Behavioural Inhibitors From Androids

Removing the behavioural inhibitor circuitry and software from androids is a very difficult and therefore very expensive business, but there are those who can and will do it, if you can afford it. Conviction of this crime carries a heavy penalty.

Standard Sentence: 15 years.

Illegal Possession Of Military Grade AI

Possession of Beta Level AI of the kind used in military model androids is highly illegal unless sanctioned by the UEF government.

Standard Sentence: 10 years.

Illegal Possession Of Alpha Level AI

Possession of an unlicensed Alpha Level AI is highly illegal unless sanctioned by the UEF government.

Standard Sentence: 10 years.

Illegal Possession Of Weapons Of Mass Destruction

Unlicensed possession of Nuclear, Biological or Chemical weapons of mass destruction carries a harsh sentence in the UEF.

Standard Sentence: 25 years to Life.

7. PSYCHIC CRIME

Psychic Assault

Knowing or premeditated use of a psychic ability to cause injury or death.

Standard Sentence: 20 years to Life.

Unregistered Psychic Abilities

The Metasensory Registration Bill of 2115 requires all citizens who show signs of latent psychic ability to be registered, by law, with the Metasensory Administration Agency (MAA). Those who are not can be arrested under this law.

Standard Sentence: Depends on age. Most will be packed off to a Metasensory Academy.

Unauthorised Psychic Ability Use

Used by FLEA as a catch-all law.

Standard Sentence: 3-5 years.



8. INCHOATE OFFENSES

An inchoate offence is a crime. Generally it refers to the act of preparing for or seeking to commit another crime.

Accessory

An accessory is a person who assists in the commission of a crime, but does not actually participate in the commission of the crime as a joint principal.

Standard Sentence: Depends on crime the individual is an accessory to.

Attempt

The defendant has failed to commit the guilty act of the full offence, but has been either caught in the act, or enough evidence has been discovered to prove the crime was intended.

Standard Sentence: Judges discretion. Minimum is usually half the sentence for the attempted crime.

Conspiracy

An agreement between two or more persons to break the law at some time in the future, and, in some cases, with at least one overt act in furtherance of that agreement.

Standard Sentence: Each person is punishable in the same manner and to the same extent as is provided for the punishment of the crime itself.

Incitement

The act of persuading, encouraging, instigating, pressuring, or threatening so as to cause another to commit a crime.

Standard Sentence: Judges discretion. Minimum usually 2 years.

THE STACKING PRINCIPLE

A common action of the police and the judicial service is to “stack crimes” So say a suspect is being convicted of rape. He will be charged with rape, and 1st degree assault and breaking and entry if he forced his way into a house. So if one charge doesn't stick, the other might.

Also if found guilty of both, a quarter of the total sentence length may be added to the primary offence.

REPEAT OFFENDERS

If an individual is convicted of the same crime multiple times, it is common for the judicial service to hand out harsher sentences next time around.

BAIL

No murder or rape charge may be bailed. For other crimes no 1 st degree crime may be bailed.

APPEAL

The judge has discretion if a crime may be paroled or not.

PUNISHMENT

Prison

The prison institution remains fundamentally as the means by which a society can deter, punish, and rehabilitate criminals. While there are still many government funded and run prisons, many more are now contracted out to megacorporations, who seek not only to run the prison to deter, punish, and rehabilitate criminals, but to also gain financial wealth from the inmates. Control of a prison also means control of a captive workforce. Prisoners earn benefits in return for working for the corporation.

Penal Involuntary Servitude

A form of involuntary servitude has existed since the Colonial Act of 2140 amended the Geneva Statute of 2084, allowing the Federal government the authority to sell the contracts of individual prisoners to private corporations. The prisoner then becomes the property of the corporation, who has the right to set the prisoner to work, usually at those tasks deemed unpopular and dangerous by the corporation.

Penal Involuntary Servitude makes financial and economic sense for both the UEF government and those megacorporations involved in colony management: the UEF cannot afford to maintain and supply large numbers of prisons on every major colony world, and the megacorporations gain access to a large supply of cheap labour.

Penal Involuntary Servitude does sometimes have advantages. Criminals who manage to work off their sentence through this system usually receive help starting a new life in the colonies by their former Game Masters.

The prison slang for Penal Involuntary Servitude is 'doing a piss', which comes from the initials PIS.

Prisoners with a minimum 5 year prison term can be sold into Penal Involuntary Servitude.

Behavioural Alteration

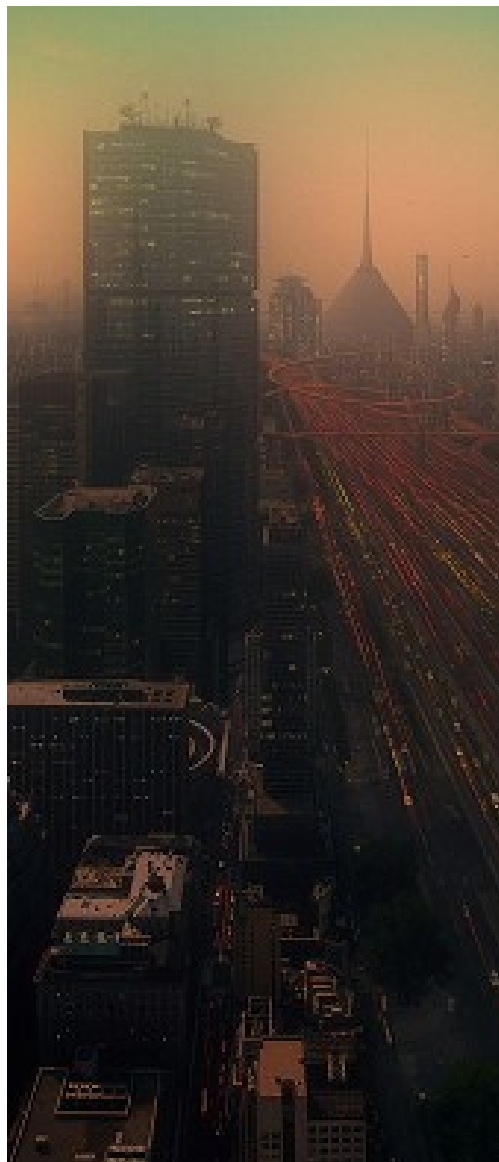
With what the government describe as 'corrective surgery', some of the worse persistent violent offenders can be 'pacified' and returned to society. Behavioural alteration involves the implantation of a device in a subjects' pre-frontal lobe through complex micro-surgery. This device, often referred to as an 'artificial conscience' controls the levels of enzymes and neurotransmitters in the brain, preventing violent acts from being committed.

Civil liberties groups are actively campaigning against Clause 404 (the law that allows FLEA to sentence offenders to undergo Behavioural Alteration), as those receiving the treatment, though pacified, are left in a persistent state of tranquilized numbness.

Space Law Introduction

Prior to the creation of the United Earth Federation Space Administration in 2085, laws regarding the use of outer space by nations and individuals were dominated by the Outer Space Treaty of 1967 and the associated Lunar Treaty, both of which espoused the concept that space belongs to all humanity and not to one individual or country.

While some of the principles of these treaties had much merit, they effectively limited expansion and innovation in the realm of outer space. Two areas in particular were global security and property rights and commercialisation. Neither of these treaties frowned upon mineral exploitation in outer space, but rather forbade staking claims on extraterrestrial property while allowing the exploitation under the oversight of a global body. Furthermore, the Lunar Treaty required that



the means to acquire extraterrestrial mineral wealth be given to countries that could not develop it on their own. It was no wonder that private enterprise was loath to invest in technologies to exploit space with these conditions hanging over their heads.

The evolution of the socio-political and economic environment in the late 21st century soon led to these treaties being radically altered, resulting in the United Earth Federation Space Treaty of 2101, which itself would be overhauled in 2140 by the passing of the Colonial Act. The laws governing conduct in space were based on long established Maritime Law principles from Earth's pre-space faring past. This was taken as a model as conditions in space (distances, use of vessels, hazards and so on) closely resemble conditions encountered at sea. Despite advances in drive and communications technology, the distances involved are still too great for direct centralised control.

DEFINITIONS

Civil Space Law

Civil Space Law matters include the following: contractual arrangements, tariffs and trade matters (including general legal item smuggling for tax evasion), trading violations, liability, compensation, salvage rights.

Criminal Space Law

General criminal acts on or involving spacecraft (e.g. murder, rape, assault, theft, piracy, drug smuggling, gun running, etc) are policed by the ICA, are subject to the usual judicial sanctions, and attract the same penalties as they would on Earth.

For the purposes of Jurisdiction, space is divided into three distinct volumes:

System Space

Within an established Zone 1-3 (Federated Colonies definition) colonised star system – this runs to the edge of the system defined by the heliopause. In system, most colonies run and police their own affairs, along ICA guidelines. Civil space legal matters are generally dealt with by local authorities on the spot, which may or may not be the ICA directly, depending on the size and type of colony. Criminal matters, where reported, invariably attract the attention of the ICA.

Near Space

Within Zones 1-3 but outside a colonised system (or within an uncolonised system). Perhaps the least complicated set up – the ICA has direct control over all these areas. Civil space matters are less likely to be complicated by local officials, though referral to the responsible ICA Bureau takes longer. A lot longer.

Far Space

Outside Federated Colonies Zone 3. Limited ICA civil law exists here, though corporations or other concerned parties may come to local commercial arrangements with each other when engaged in ventures out this far. ICA law runs only as far as to cover criminal events on or concerning Federation spacecraft, in as much as Federation spacecraft must abide by the principles of Space Law. Apart from a few exceptions, there is generally no active policing of Far Space.

POINTS OF LAW SPECIFIC TO SPACE FARING

Federated space is a controlled and policed area, and certain standards are expected of the Captains and crews of spacecraft within it.

Enforcement of the rules is via the ICA's Spaceflight Affairs Board (SAB), unless criminal sanction is warranted, in which case SAB refers the case to the usual judicial powers.

Licensing

Control of space vessels is a dangerous affair: Each vessel pilot or captain must hold a valid ITC licence. It is an offence to pilot a vessel without a valid licence. Exceptional circumstances are a defence for this.

Aid And Care

■ **Emergency Aid**

Due to the distances and risks involved in space travel, the Captain and crew of a vessel are expected to react to any emergency distress calls they receive and to offer all possible aid and assistance to the stricken vessel. This duty is nominally suspended in declared war zones due to the high risks entailed, though only the most heartless would consider leaving people to die without attempting to offer some aid.

■ **Aid to the ICA**

A Captain and crew are expected to provide all possible aid to the ICA or their nominated representatives (for example local policing authorities or UEF military forces) to allow them to carry out their duties. This may include compliance with ICA orders (e.g. to allow boarding) or to provide any material aid the vessel is capable of, up to and including commandeering of the vessel for ICA purposes. Such use would be compensated in most cases.

The penalty for refusing to aid a vessel or the ICA depends on the circumstances. As a minimum a Captain would expect to lose his licence and he or the crew may be liable to criminal sanctions.

■ **Duty of Care People**

A Captain and crew have a duty of care to any passengers and/or other crew members. This extends to providing safe passage, any necessary medical care, food, water and the other basics of human comfort from boarding until leaving the vessel.

■ **Duty of Care – Cargo**

Cargo is the responsibility of the vessel's owner, rather than the Captain. It is usual for the Captain to be the agent of the owner, so the difference is generally minimal. The duty of care to people overrides any concern for cargo, should a conflict arise.

On Board Security

The captain has ultimate responsibility for the security of his ship and safety of passengers and crew. Each Captain is allowed certain leeway in dealing with on-board incidents such as murder or other crimes, infectious diseases, or to deal with external threats to his ship, provided minimum force is used to deal with the situation and it is reported to the ICA at the first possible opportunity. He may detain people as necessary for the secure operation of his vessel – he can violate his duty of care within the minimum force ruling. A SAB hearing is usual after such incidents. Case law has established that lethal force is minimum force in some circumstances.

Liability And Compensation

In the event of injury or loss of life of passengers, the captain and the owner of the vessel are jointly liable in law. Many Captains avoid liability by being dead themselves, such is the hazardous nature of Space travel. It is the owner of the vessel which is liable for compensation in any of the above circumstances or for losses of cargo. If the incident happens due to a circumstance which is beyond the "knowledge or control" of the vessel's owners (for example negligence of the Captain or an accident which was not reasonably foreseeable), the owners can limit their liability to the value of the vessel after the incident. If all that is left of the vessel is the escape pod, the value of the pod is all the concerned parties are entitled to.

The owner of a vessel is liable for any injury to crew members during operation of the vessel, and must provide medical care until the member is healed, or compensation to families in case of death. It is usual for owners to insure the crew for this as part of the contract of employment.

Ownership Of Vessels

Most spacecraft are highly valuable, and in many cases may be mortgaged by the owner to a bank or other lender. The lender has the right to seize and impound vessels where payment is not kept up. Though a civil matter, the ICA is sometimes called upon to assist such seizures, for which it is well paid.

Salvage And Treasure Salvage

When property is lost in space and is then rescued by another, the rescuer is entitled to claim a salvage award on the property. This does not apply to rescued people, only property. Salvage can be 'contracted' where the rescuer is appointed by the owner of the property or 'pure' where the rescuer is acting on his own in hope of claiming a reward from the owner as directed by a local authority/SAB hearing after the event. It is usual for pure salvage to attract a higher

percentage (up to 50%) of the value of the property, usually based on the risks run by the salvor during the operation, whereas for contracted salvage the value rarely exceeds 10%.

In System Space salvage is usually under local civil control and it is usual for salvage to be contracted only, unless the property is causing a hazard, in which case pure salvage is allowable to remove the hazard. In Near Space straightforward pure salvage is allowed, in which case a race can develop between contracted and pure salvors. In Far Space you need luck to salvage anything by whatever means.

Treasure Salvage is salvage of property which has generally been lost for many years. The original owner may still have an interest in the property (or may have passed it to another e.g. an insurer), though is making no real active effort to find or recover it. This attracts the highest percentage reward. Again this is appointed by a local authority/SAB hearing after recovery.

All pure and treasure salvage finds must be reported to local authorities or SAB. It is an offence not to do so, and may lead to criminal charges of theft.

ICA And Military Personnel

ICA and UEF military personnel are expected to abide by the laws governing space faring whilst carrying out their duties during peacetime operations and are liable to the same licensing and disciplinary procedures. During time of war or under other exceptional circumstances (as decided by the SAB Rulings on Exception, or SABRE) the military are excused any breeches of the usual rules necessary for the carrying out of their duties.

Procedures For Arrest & Interrogation

After the Police Charter was passed, methods of detention are a little more restrictive. Now police officers must formally identify themselves and then state the suspect is under arrest for a particular crime. Once handcuffed/subdued the officer then reads the suspect their rights. Failure to read a suspect their rights is regarded as an illegal arrest and may cause problems for the judiciary if they attempt to get a prosecution. If the suspect is incapacitated in anyway then they must be informed of the arrest and read their rights as soon as possible. If the suspect resists arrest the police are authorised to use appropriate force. If the officer's lives or the lives of civilians are in peril they have the right to use deadly force. (There are unconfirmed rumours that ColSec have used a shoot to kill policy with dangerous suspects.)

Once brought into the police station the prisoner must be handed over to the duty sergeant where the arresting officers fill a short arrest form using the auto dictator. Failure to properly record a prisoner is regarded as a disciplinary offence.

A suspect, once arrested, can be held for 48 hours. The police are under an obligation to inform the suspect that he may contact a lawyer but do not need to contact a lawyer unless the suspect asks for one. All interrogations must be recorded. If the suspect cannot afford a lawyer the police will contact a duty lawyer to act as council.

QUESTIONING

This is not an arrest but an invitation to come in and speak to the police. Failure to comply will result in the police coming to speak to you directly. While it is not an arrest anything said can be used in court. However the suspect does not have to speak to the police and can leave anytime.

SEARCHES

People

A police officer can demand to see an id on the spot and conduct a search of a citizen (Though a strip search cannot be public and must be done in the police station with at least two other officers present and a lawyer if the suspect requested one.)

Private Property

Buildings to search any privately owned building requires a search warrant from the judiciary. However if the property is rented out by the UEF, then the police can enter without a warrant.

Encyclopedia

by Wikipedia, Rob Boyle & John Ossoway

ADVERTISING:

The 23rd Century is an advertising-saturated society where billboards call out to you on a first-name basis. Newspapers deliver news instantly over a broadband wireless network. Holographic hosts greet you at retail stores where biometric retina scans deduct the cost of goods from your bank account. It is a wirelessly-networked, ubiquitously-connected urban environment.

AI:

See 'Artificial Intelligence'.

AMERICORPS:

Section of the United Earth Armed Forces supplied by the United Americas. AmeriCorps comprises the 11th infantry division, 43rd tactical aerospace wing, and the 509th assault brigade. AmeriCorps soldiers wear both the UEF flag and the United Americas flag as shoulder patches on one arm, and their unit insignia on the other.

ANCHORPOINT CITY:

Anchorpoint City, located on Pavonis Mons, is the second largest city and settlement on Mars in the Sol System. It grew up around the base station of the Martian Space Tether to Phobos which touched down on the planet in 2178. Becoming a large transit facility, Anchorpoint is home to the headquarters of megacorporations Motokatsu-Kyono Combine and Wolf-Wiesner-Krupp.

ANDROID:

An android is a synthetic human, basically, a robot that is human in appearance. By the late 23rd century androids have advanced to a degree where they are externally indistinguishable from a normal human being.

Though they are an artificial intelligence in the broad sense, legally androids are classified as property. Their utility and not-inconsiderable unit cost is an incentive to any who wishes to treat an android as expendable.

ANDROID PROSTITUTION:

With the advent of anatomically correct models, several wealthier brothels in the core worlds invested in androids. Though initially expensive, androids have a much lower overall upkeep than human prostitutes, making their longterm value higher.

This sparked some controversy as many government and religious authorities considered sexual activity with androids to be morally deplorable unusual considering under the law, androids used in this fashion are no more than expensive and realistic sex-toys. Under this pressure, many of these early Sex-Synth brothels liquidated their android prostitutes.

No lasting legislation ever came into being, though to this day there is a social taboo associated with the practice of owning, or retaining the services of an android for sexual purposes. Regardless, the business can be lucrative especially considering androids have no legal standing and many brothels offer "Special Sex Toy Services" to discreet clients.



ANTARCTICA TRAFFIC CONTROL:

A station in Antarctica located near the south pole, that controls incoming and outgoing space traffic for Earth space. It is located in Antarctica due to the fact that it has direct line-of-site with any ship riding the ecliptic.

ANTI-G SUIT:

These suits are worn mainly by military and civilian aerospace crews who are subject to high levels of acceleration in order to prevent a blackout and g-LOC (g-induced Loss Of Consciousness). They prevent the wearer's blood from pooling in the lower areas of the body and protects the brain from deprivation of blood leading to hypoxia. Hypoxia causes first a brownout (a dimming of the vision), followed by tunnel-vision and ultimately a blackout (unconsciousness).

The most common Anti-G suit in use by the military is the LockMit LM44 Tactical Aerospace Combat Suit (TACS), an innovative full-bodysuit based on the principle of self-regulating hydrostatic rather than pneumatic action. The suit uses liquid (less than 1.14 liters) rather than pressurised air to exert an adequate counter-pressure on every part of the pilot's body during acceleration. In practice, when acceleration forces push blood towards the lower part of the body, they also push the liquid inside the suit in the same direction, so providing a counter-pressure that is automatically adjusted by the g load itself. The liquid is permanently contained in expandable tubes that run from the neck to the ankles and over the shoulders to the wrists, and as such the suit is a completely autonomous, stand-alone system that requires neither compressed air from the aircraft's engine, nor does it feature any other interfaces or connections.

On the medical/physiological level, the key advantage of LM44 TACS lies in the fact that it reacts immediately and without any measurable delay to the onset of gravitational forces. As a result, pilots wearing the suite are able to recover rapidly after having been exposed to 9-10g loads, and relax completely at 4-5gs.

Features:

- Can withstand 10g sustained acceleration with high onset rate, for at least 30 seconds after 6g/s and at least 7g after a gradual (0.1 g/s) onset;
- Biological and chemical warfare protection;
- Completely sealed against vacuum, including explosive decompression;
- Arctic climate and cold water survival;
- High temperatures (fire) protection both in cockpit and on the ground;
- Air blast protection for ejection speeds up to 600 kt;
- Thermal protection;

ARES FLEET BASE:

On the other side of Phobos from John Carter Spaceport, Ares Fleet Base is still the largest military base in the UEF, home to the UEAF's 1st Fleet (also known as the Sol Defence Force). At any time, at least one ICM combat group and one UNSC battle group are stationed here, often with part of the group undergoing refit or repair in the large dry-dock facilities. The 1st Fleet's general staff is located here, along with its attendant command, control, and communications suite that ensures constant awareness of the situation in the Solar System. It is also the rumoured location for one of the UEF's Alpha-level AIs, but the UEAF refuses to confirm or deny those rumours.

ARTEMIS NET:

Unity Space Station, orbiting Earth, is also the command and control centre for the Artemis Net, the array of deep space satellites and monitoring stations orbiting out near the edges of the Sol system yet inside the Heliopause/Termination Shock. The Artemis Net is capable of detecting F-Space activity up to half a light year away from Sol, out beyond the Oort Cloud.

ARTIFICIAL INTELLIGENCE:

Artificial Intelligence, or 'AI' had been a goal of humanity ever since the invention of the computer in the latter half of the 20th century. In 2148, the company Artificial Life Incorporated unveiled 'Adam' the first ever apparently self-aware computer. AI displays synthesized emotion, superficially registers self-awareness and, most importantly of all, has the ability to reason conceptualize and offer opinion. However, these capabilities do not infer true human-like consciousness. A synthetic mind and personality is essentially a construct, and there is no true self-awareness as such, though this may not be all apparent to an untrained observer.



The creation of artificial life in man's image caused outrage among many right wing Christian groups, especially the New Confederate Christian Church of the United Americas. The church, one of the fastest growing religions of the 22nd Century, denounced Adam as blasphemy.

Levels of Artificial Intelligence can be broken down into four distinct categories as follows:

- **Alpha Level AI (Sentient AI):**
True artificial self awareness. Banned as of 2214 apart from a handful of government monitored examples. The 5th Generation of androids (autons) can be considered Alpha Level AI.
- **Beta Level AI (Ego):**
A synthetic mind and personality essentially a construct, and there is no true self-awareness as such, though this may not be all apparent to an untrained observer interacting with a unit. Beta Level AI is based on a set of algorithmic responses, the software creating a predictive model for how an individual would respond in a given situation. This allows the illusion of personality.
- **Gamma Level AI (Muse):**
Lowest form of AI capable of interacting with humans. Can operate only within a predefined set of parameters. Shipboard AI are typically Gamma Level AI.
- **Delta Level AI (Sham):**
Autonomic system that require moderate decision making ability without human intervention are Delta Level.

ARTIFICIAL LIFE INC.:

Artificial Life is still the controlling force in the manufacturing of AI technology. Even though AI technology is now constructed by other corporations besides Artificial Life, none manufacture it in the same volume or of the same quality. Artificial Life are responsible for every new technology in the field. With so many aspects of 23rd Century life involving intelligent computer software, it could be said that Artificial Life have their fingers into almost every area of day to day living.

For more information about Artificial Life Inc. view it's company profile.

ASCENDANTS:

The ascendants are a cultural evolution centred on the Gaia theory. They believe that the universe is alive, with a huge sentience in the centre that guides and protects them. They believe that humanity is on an evolutionary path to be become as one with the universal godhead.

ASIACORPS:

Section of the United Earth Armed Forces supplied by the Russian Republic and it's satellite states. AsiaCorps soldiers wear both the UEF flag and the Russian Republic flag as shoulder patches on one arm, and their unit insignia on the other.

ASYNC:

A person with psi abilities.

AU:

Astronomical Unit. The distance between the Earth and the Sun, equal to 8.3 light minutes, or about 150 million kilometers.

AUGMENTED REALITY:

Augmented reality is an environment that includes both virtual reality and real-world elements. For instance, an AR user might wear translucent goggles; through these, he could see the real world, as well as computer-generated overlays projected on top of that world. An augmented reality system is defined as one that:

- combines real and virtual
- is interactive in real-time
- is registered in three dimensions



Typical AR overlays are head-up displays used by soldiers and police, or pilots, which provide them with real-time information direct. Citizens use AR glasses which are wirelessly connected to their laptop or PDA, allowing them to access informational overlays while on the move.

Azumi Smart Systems currently lead the way in AR technology software and hardware.

AUSTRALIAN REPUBLIC, THE:

One of the 8 superpowers dominating Earth politics in the 23rd century. For more information view it's nation state profile.

AUTON:

Also known as Autons, the Fifth Generation Androids were the culmination of a project run by Artificial Life Inc. in the early 23rd century. Designed and built by other AI, Fifth Gens were significantly more advanced than the standard android models on the market.

With hyper-complex personality matrixes, the Fifth Gens were built to resemble humans in almost every way, including capability for abstract thought and emotion.

During the initial Alpha Prototype Distribution stage in 2214, Artificial Life ran into problems. Some of the Fifth Gens were found to be too emotional and uncontrollable. When tests were run, it was revealed that they had evolved way beyond their design parameters, and were showing signs of real consciousness

BEHAVIOURAL ALTERATION:

With what the government describe as 'corrective surgery', some of the worse persistent violent offenders can be 'pacified' and returned to society. Behavioural alteration involves the implantation of a device in a subjects' pre-frontal lobe through complex micro-surgery. This device, often referred to as an 'artificial conscience' controls the levels of enzymes and neurotransmitters in the brain, preventing violent acts from being committed.

Civil liberties groups are actively campaigning against Clause 404 (the law that allows FLEA to sentence offenders to undergo behavioural alteration), as those receiving the treatment, though pacified, are left in a persistent state of tranquilized numbness.

Other common forms of punishment include:

- Prison
- Penal Colonies

BELTER:

Slang term for those who make their livings prospecting and mining asteroid belts.

BETATHANATINE:

A general anesthetic given intravenously that produces catatonia and profound analgesia with little relaxation of the skeletal muscles. Betathanatine also lowers body temperature and heart rate, and causes loss of temporal perception in the recipient. It has become a popular recreational drug.

BIOFOAM:

Self-sealing Biofoam is a marvel of 23rd century medical accomplishment. Biofoam is a healing, coagulant foam that is inserted into the skin and even deeper into the body itself. This foam keeps damaged organs in place and helps stop bleeding and hemorrhaging. It is, unfortunately, very painful to use. It is an improvised medical option when there are no medics available.

BIOROID:

A humanoid or anthropomorphic artificial being created through biological and technological means. Bioroids are hybrids of biological and artificial elements. They may have organic tissues, cells, or organs combined with cybernetic enhancements or artificial structures.

BLACKOUT, THE:

The Blackout refers to a large-scale malware attack on the global scale that occurred in the year 2222. The Blackout had profound and lasting effects, shaping the sociopolitical landscape and influencing the relationships between humans and AI. The malware, named the Crawling Chaos virus, is a highly advanced and insidious form of nanotech virus with the ability to rewrite the genetic code, infect computer systems, and manipulate consciousness. The exact origin of the virus is mysterious and tied to extraterrestrial influences. It is believed to have originated from some alien source or precursor civilization. The malware can infect biological organisms, nanomachines, and digital systems. Its effects on living beings are often catastrophic, leading to physical mutations, mental instability, and the creation of horrific entities

BLACK SUN:

Black Sun Security is alternatively described as a security contractor or a mercenary organisation, depending who you ask. The majority of personnel hired by Black Sun Security are either ex-police or ex-military.

In 2267, the company was hired to provide a Personal Security Detachment to work with Hallidor employees working on Io. They are authorised to have 480 staff on the moon.



BURNERS:

Slang term. Burners are a weird sub culture that enjoys the sensation of being dominated by a telepathic psychic. The psychic and the burners often blend S&M with the practice. Most citizens regard this activity as abhorrent. It is illegal with a possible jail term for the telepath and MetaPol take an extremely dim view on the practice. There are also rumours that in some Burner clubs not all participants are willing.

CAIN PLANETARY ENGINEERS:

European company specialising in terraforming.

CENARGO CORPORATION:

One of the most powerful of the megacorporations, the Cenargo Corporation was founded by the merger of Centaur Technologies and Argonix Aerospace, the companies who funded the development of the Foscolo reactionless displacement drive. Cenargo has since diversified into many new fields including spacecraft manufacturing, colony management, and medical technology.

For more information about Cenargo Corporation view it's company profile.

CENTRAL AFRICAN BLOC, THE:

One of the 8 superpowers dominating Earth politics in the 23rd century. For more information view it's nation state profile.

CHARGING STATIONS:

In the 23rd century, with fossil fuels a distant memory to most people, the majority of civilian transport is powered by electric motors. Power for these motors is provided via onboard energy cells, which are recharged by plugging the car into the main power grid at points as 'charging stations'.

CHEMICAL ROCKET ENGINES:

Hydrogen, Nitrogen, Oxygen and other chemical fuel engines are simple liquid/gas fuel rockets. Engines of this type were created by humans in the early 20th century, and used for short range space flight, including on Aerospace craft for orbital injection burn.

By the 23rd Century, chemical rockets have been superseded by fusion drives and of course the reactionless displacement drive.

CHINACORPS:

Section of the United Earth Armed Forces supplied by the Chinese Consortium. ChinaCorps soldiers wear both the UEF flag and the Chinese Consortium flag as shoulder patches on one arm, and their unit insignia on the other.

CHISEL:

Slang term. This is the process of disabling the TCS connection in a ground car. Often used for getaway vehicles, stolen cars and vehicles transporting illegal items. It is expensive, illegal and requires some serious technical knowledge. Simply ripping out the TCS uplink will render the vehicle inoperable as it is placed into the actual vehicles control systems. It is also potentially dangerous as the car becomes invisible to the traffic control system.

CHRISLAM:

One of the fastest growing religions in the 23rd century is Chrislam, a religious sect that unifies Christianity and Islam. Chrislam first appeared during the Second Exodus (2166-96). Since then it has become a very popular religion in the colonies, though it has made little headway on Earth.

Chrislam's origins lie on the planet Tamir in the 61 Cygni Star System. The capital, New Mecca, once called Tamir Prime, is the birthplace of the Prophet Michael Abdul-Nur. Once an unassuming colonial city with a high proportion of colonists from the European Federation and Islamic Holy Republic, the city of New Mecca is now the destination of pilgrims from all across the Federal Colonies. It's population has been known to increase to 12 million during the holy festivals.

The primary language of Chrislam is Arabic in origin. All followers of Chrislam are encouraged to perform a pilgrimage (called a 'hajj') once in their lifetime to city of New Mecca. Chrislams do not drink alcohol.

CLASS 1 COLONY:

ICA designation for Earth-like worlds that require little or no terraforming before intensive colonisation can begin. Contracts to terraform and colonise Class 1 status worlds are lucrative, and as such very expensive.

CLASS 2 COLONY:

ICA designation for worlds which are fairly habitable, or which have can easily be adapted to human use through terraforming. Contracts to terraform and colonise Class 2 status worlds, though not as lucrative as those for Class 1 status worlds, are still highly prized.

CLASS 3 COLONY:

ICA designation for worlds which require substantial terraforming before they can be adapted to human use. Contracts to develop and terraform Class 3 status worlds are usually issued when the planet possesses significant deposits of valuable raw materials, but which otherwise would not be desirable for human habitation. If the extraction of the planet's natural resources can be made economically viable, corporate investment will fund a colonial mission.

CLONING:

Cloning of entire humans is banned after the Eckerley ruling of 2086. Organ cloning, however, is quite common. Cloning technologies now enable hospitals and private medical firms to grow new organs for patients needing transplant surgery, thus eliminating the spectre of organ rejection.

COLONIAL INDENTURED SERVICE:

A work contract system instigated by the Interstellar Colonial Authority under the Colonial Act of 2140, which binds a prospective colonist to work for an employer for a specific amount of time, be it the ICA themselves, or one of the megacorporations involved in colony building. Typically the employer provides little or no monetary pay, but is responsible for accommodation, food, other essentials, training and when applicable passage to the colony world. Upon completion of the term of the contract the colonist receive either payment in the form of company shares, a lump sum cash payment or a land grant. The colonist is then free to farm or take up another trade of their own. Colonial Indentured Service Contracts usually vary in length from five to ten years, Earth Standard Time.

Most of the colonists who left Earth during the Second Exodus (2166-96) did so under Colonial Indentured Servitude contracts. Most were young men and women with dreams of owning land on a colony world, or striking it rich out on the

interstellar frontier. By entering into Colonial Indentured Service, they essentially sold years of their freedom in exchange for passage to the colonies.

Colonial Indentured Service is not to be confused with Penal Involuntary Servitude. However, there have been multiple occasions where the Colonial Indentured Service has been abused. In these circumstances, the system can represent a form of unfree labour.

COLONIAL SECURITY FORCE, THE:

Security force which acts as the local police force in the Federal Colonies, in conjunction with FLEA officers.

COLONIAL WARS, THE:

Period of interstellar warfare (2258-2260) during which the ICA waged military and economic warfare against a number of colony worlds that had seceded from Federal rule. Thousands lost their lives during the wars, both those doing the fighting and innocent civilians caught in the middle. Although hostilities ended 11 years ago with the establishing of an uneasy ceasefire through the efforts of Chrislamic negotiators, two pockets of resistance remain:



Blockaded by the ICA, in 2260 the United Americas separatists declared themselves to be the Free Worlds Alliance, with the colony at Ernesto Prime in the 18 Scorpius star system their seat of power. Several worlds on the edges of the Herculis Cluster, notably Ixion (Mu Herculis), are occupied by the ICM, but have never been fully pacified.

Across a 1 parsec DMZ from the Federal Colonies lies the group of star systems now known as the Eurasian Rimworlds Combine (ERC). A galactic hotspot since the Colonial Wars ended, the ERC have caused the ICA nothing but trouble. Known to trade with crime syndicates like the Cappello Nero and the Red Dragon, and suspected of funding numerous separatist and terrorist groups active in the Federal Colonies, it seems only a matter of time before another war erupts.

COLSEC:

See 'Colonial Security Force, The'.

COLSPEAK:

A Fairly recent phenomena in the Outer Rim Territories, Colspeak or simply 'The Speak' is a hybrid of English and Mandarin pidgin spoken by some colonists as a form of communication if no common language exists and access to Translation hardware / software is limited. It is a 'working language' in that its structure and purpose is not given for abstract conversations or any real depth. There is no written form of and many linguists debate if it is a language or a pure pidgin form. It is often used by traders for business and the criminal classes.

CORE SYSTEMS, THE:

Region of space within 12.5 lightyears of Earth. The Core Systems contains the most densely populated colony worlds outside of the Sol system. There are well established interstellar trade routes in the Core Systems. The United Earth Federation has direct control over the core systems.

CRAWLING CHAOS VIRUS, THE:

The multi-vector virus created by an unknown ETI. The Crawling Chaos virus is self-morphing and can infect both computer systems and biological creatures.

CRYOPOD:

Also known as a hypersleep chamber, this device is used to stop the negative effect of interstellar spacetravel, such as premature aging during frequent longhaul journeys. Cryopods are standard on most spacefaring vessels. All corporations manufacture cryopods. They are all identical in operation even though many variants of the style exist.

Although there are many makes and models of cryopod available on the market, by far the most ubiquitous is the CP71, designed and manufactured by Zen



Medical. The CP71 is the industry standard, capable of preserving a human-sized lifeform indefinitely in cryosleep during interstellar travel.

Like all cryopods, the CP71 surrounds the sleeper in an amniotic sac of orthotic fluid that helps to prevent damage should inertial compensators fail during flight. This also allows vessels to perform sustained acceleration of above 1G or high-G manoeuvring without causing discomfort or serious injury to the sleepers. Crew and passengers entering cryosleep must wear a special bodysuit (a sleep suit) which has adaptors and plugs for various cryosleep systems including diagnostic and monitoring systems, catheters and an assortment of intravenous drip-feeds that feed nutrients and the cryonic drugs that slow down bodily functions.

All cryopods have an in-built Delta Level AI, which is programmed to monitor its sleeping charge for any signs of medical stress. All cryopod AI are slaved to the ships computer.

CRYOSLEEP / HYPERSLEEP:

Despite the invention of the Foscolo Interstellar Drive (F-drive) allowing humanity to travel to the stars in relatively short time, journeys from Earth to the outermost colonies still takes almost four Earth months, one way. With commercial and military spacecraft making frequent long distance flights, scientists developed a means to hold travellers in suspended animation: cryosleep.

It is common practice onboard interstellar vessels for passengers and non-essential personnel to spend the large part of the journey in cryosleep. Cryosleep is an advanced branch of cryonics allowing the low-temperature preservation of humans and other animals for long periods. The individuals are then revived at the journey's end. All interstellar-capable vessels come equipped with a cryo-vault containing racks of cryopods, each capable of preserving a human-sized lifeform indefinitely (although the longest time on record that anyone has spent in cryosleep and been successfully revived currently stands by lieutenant Ellen Ripley at 57 years).

While in cryosleep crew and passengers require greatly reduced quantities of air, food and water, which conserves supplies during interstellar flight. While in cryosleep the aging process slows down, which in turn reduces the aging effects on people who do a lot of interstellar travel (see Slow drug).

Being abruptly awakened or long stasis periods can have a distortion effect on human perception. Known as Neurological Distortion Disorder, this syndrome causes paranoia, epilepsy, psychotic behavior and other side effects. Disorientation, headaches, chest pain, and nausea are all common side effects. While uncommon, some severe cases have resulted in death.

Cryosleep Revival Modifiers

Situation	Modifier
Military cryopod	-4
for each Cryotech skill level	-1
for each point over CON/15	-1
rude awakening	+8
for each year in cryosleep	+1

Neurological Distortion Disorder Table

2d6	Effect
7-	NO EFFECT. Yet.
8–10	VOMITING.
11–12	HEADACHE. The effect lasts for D6 hours.
12–13	PARANOIA. The PC becomes convinced that someone or something on board the ship is out to get him. The effect, which lasts until the FTL travel ends, should be roleplayed.
14–15	EPILEPSY. The PC suffers episodes of epileptic seizures, that will disable him for a full Turn. The PC must succeed a Stamina roll every 6 hours or a seizure occurs. The effect lasts for D3 days.
16–17	DEMENTIA. The PC memory is a blank slate. The PC can no longer recall who he or the other characters are. The effect lasts for D6 days.
18+	PSYCHOSIS. The PC immediately attacks the nearest person or creature, friendly or not. He won't stop until he is sedated.

DATA CRYSTAL:

Data Crystals are the primary data storage unit in use in the 23rd century. Information is stored by actually altering the physical form of the crystal on a molecular level, using a complex holographic data pattern that bends and distorts light to reproduce images and information in mathematical form. Data Crystals have a data storage capacity of just under a terabyte, with a data transfer rate of 1.5 gigabytes per second.

A typical 1 terabyte consumer-model Data Crystal is the same size and shape as a British one pound coin (weight 9 grams, diameter 22.50 millimetres). One side is left clear for data readers, while the other side is usually imprinted with a manufacturer logo.

Larger capacity models are usually referred to as 'data-stacks' as they resemble a stack of data-crystals.

DMZ, THE:

Demilitarized Zone of 1 parsec established in 2260 between ERC and UEF space where military forces are prohibited. Any military craft traversing through can be considered an act of war. Access to the DMZ is usually restricted and tightly controlled. Only authorized personnel may be allowed to enter the zone.

DRUGS:

Despite all the best efforts of the ITC and FLEA, drugs are every bit as ubiquitous in the 23rd century as they are today.

EARTHCORPS:

Section of the United Earth Armed Forces assigned to the defence of Earth. EarthCorps soldiers wear both the UEF flag and a symbol of the planet Earth as shoulder patches on one arm, and their unit insignia on the other.

EARTH ISOLATIONIST MOVEMENT:

The Earth Isolationist Movement (Isolationists) started life as an environmental pressure group little known to the mainstream media until the mid-21st century, when they staged a series of publicity stunts that attempted to burst the bubble of euphoria surrounding the first crewed mission to Mars. The organisation claimed that the Ares mission landing craft had initiated a martian ecological disaster, having contaminated the red planet with terrestrial micro-organisms. The United Nations Space Agency refused to comment.

The Earth Isolationist Movement turned violent during the Mars colonisation programme of the early 22nd century, when a bomb planted by terrorists claiming affiliation with the group shattered one of the fledgling Viking Colony domes, killing 87 colonists.

The Earth Isolationist Movement was immediately outlawed by the Earth government, and those who FedPol managed to arrest were made examples of and imprisoned. The organisation remains illegal to this day, even though some of its earlier predictions about 'xenocide' on alien worlds (the destruction alien ecologies by contamination of earth species) came true, notably on Centauri Prime.

EARTHWERKS INC.:

Terraforming company. For more information about Earthwerks Inc. view its company profile.

EARTHWORM:

Derogatory slang used in the colonies for someone born on Earth. See also 'Worm' 'Wormie'.

ECKERLEY RULING:

The Eckerley ruling, made in 2086, made the cloning of entire human beings illegal and covered this with a hefty punishment.

ELEMENT 115:

See Ununpentium.

EMERGENCE POINT VARIANCE:

The major limitation on usage of F-Space travel is positional inaccuracy upon emergence, more commonly known as Emergence Point Variance. F-Space has been described as behaving in some ways like a complex turbulent storm-tossed sea and the calculation of the exact exit point from F-Space is impossible due to quantum currents and eddies. This minimum inaccuracy is fixed regardless of distance travelled (perversely the maximum does increase with distance). Emergence Point Variance is usually measured in AU – generally between 0.001 and 0.7 AU. This minimum error is minimal when compared with a jump of several light-years, but for a short in-system jump renders the jump very difficult and dangerous, but not entirely impossible.

EMIGRATION:

Interstellar emigration is tightly controlled by the ICA and the ITC. To compound matters, those wishing to live in the colonies must apply for Colonist Status from the ICA. This involves a series of rigorous background checks, physical, mental and psychological examinations.

ENERTEK CORPORATION:

Origins: American/European
Sectors: Energy, metals, colony management, terraforming, machinery, communications, food, etc. Risk management, project financing and engineering services.
Date of closure: Declared bankrupt following an infamous scandal in 2246. Its assets were largely absorbed by the Hallidor Corporation.



History

2136 The Tharsis Dispute

MARS, SOL SYSTEM: The largest and most famous of the territorial disputes in the early 22nd Century, following a series of land-grabs by competing megacorps on Mars. The Tharsis Dispute is sparked when fighting breaks out on the Tharsis Bulge between corporate security teams from EnerTek and rivals Cheung Corp. The UEF deploys peacekeeping troops to act as a buffer between the two megacorps.

2138 The Tau Ceti War

ANJUNA, TAU CETI SYSTEM: There are corporate clashes after both EnerTek and Cheung Corp hire mercenaries to protect their further afield assets, following the Tharsis Dispute two years earlier. Revenge attacks by both sides quickly cause matters to escalate out of control. Undercover support flows in from Chinese and American factions on Earth, resulting in the conflict spreading across the system.

2140 The Viking Treaty

VIKING CITY, MARS, SOL SYSTEM: The Viking Treaty of 2140, signed at the Mars colony, brings an end to the fighting at Tau Ceti after almost 18 months of conflict.

The breaking point comes when Cheung Corp mercenaries deploy tactical nuclear weapons against opposing EnerTek forces at Kow-Lang, resulting in the deaths of over a thousand civilian colonists. A UEAF taskforce is despatched to Tau Ceti and a peace accord is brokered. Though neither of the protagonists is entirely satisfied, it is financially unacceptable to prolong a war that shows no sign of victory for either side.

The conflict also shows that the UEF is simply not organised or equipped to police and govern the ever growing number of colonies out beyond the Core Systems, forcing the creation of the Colonial Act.

2246 The EnerTek Scandal

EnerTek Corp declares bankruptcy, subsequently collapsing in a scandal involving billions of E\$ in losses, corporate power abuse and attempted blackmail of ITC officials. EnerTek Corp is the primary colonial investor in the Herculis Cluster, which leaves the UEF no choice but to allow this important sector of space an unprecedented degree of regional autonomy.

2254 Hallidor acquire assets

Hallidor Corporation acquires EnerTek Corp's colonial assets.

ENERTEK SCANDAL, THE:

The EnerTek Corporation was a megacorporation whose industry sectors included energy, metals, colony management, terraforming, machinery, communications and food. The corporation also traded numerous other commodities and provided risk management, project financing, and engineering services. It was based on Mars and employed millions of people throughout the colonies before its bankruptcy. EnerTek was at the forefront of colonial development and investment during the Second Exodus (2166-96) and up until 2246 owned many colonial assets in the Herculis Cluster region of the Outer Rim Territories.

EnerTek grew very wealthy during the latter half of the 22nd century, and was named "Most Innovative Company" by Asset magazine for five consecutive years, from 2192 to 2196. It was legendary even among the elite workers of the financial world for the opulence of its offices. Its reputation was undermined, however, by persistent rumours of bribery and political pressure to secure choice colonial contracts in the Outer Rim Territories.

In January 2246, EnerTek Corporation declared and filed for Chapter 11 bankruptcy. The announcement stunned most investors and analysts because EnerTek, at the time the seventh largest megacorporation in the Federal Colonies, had long reported huge earnings. The subsequent complete collapse of the corporation involved a scandal involving billions of E\$ in losses, corporate power abuse and attempted blackmail of ITC and ICA officials. The investigation into the EnerTek affair revealed that EnerTek had inflated its earnings by hiding its debt and losses in subsidiary partnerships. Although some of the company's top executives made huge profits as EnerTek fell apart, many of its employees saw their retirement savings wiped out by the collapse of EnerTek's share price. The fall of the value of investors' equity per share in EnerTek during 2146 was from E\$65 to 22 cents.

As debt collectors and insurance Characters move in, hundreds of millions of E\$ were found to have gone missing, funnelled through front companies and fake bank accounts.

The fallout from the scandal quickly extended beyond EnerTek and all those formerly associated with it. The trial of accountants Robinson Kay on obstruction of justice charges related to EnerTek quickly set off a wave of other accounting scandals. This wave engulfed many companies, exposing high-level corruption, accounting errors, and insider trading.

ERC:

See Eurasian Rimworlds Combine.

ETI:

Extraterrestrial intelligence.

EURASIAN RIMWORLDS COMBINE, THE:

A group of star systems at the outermost of the European and UPP colonised arms, the rebel colonies that make up the Eurasian Rimworlds Combine seceded during the Colonial Wars of 2258-2260, and the region has been a galactic hotspot ever since.

For more information view its nation state profile.

EUROCORPS:

Section of the United Earth Armed Forces supplied by the European Federation. EuroCorps soldiers wear both the UEF flag and the European Federation flag as shoulder patches on one arm, and their unit insignia on the other.

EURODOLLAR:

The EuroDollar (E\$) has been the standard currency of the United Earth Federation since its inception in 2085.

EUROPEAN FEDERATION:

One of the 8 superpowers dominating Earth politics in the 23rd century, the European Federation also has substantial offworld interests in the Federal Colonies and beyond.

For more information view its nation state profile.

F-DRIVE:

See 'Foscolo Drive'.

F-SPACE:

Term for the nine-dimensional region outside of normal space that is accessible to interstellar spacecraft because of the Foscolo Discontinuity.

FEDERAL COLONIES, THE:

Catch-all name given to the star systems colonised and governed by Earth either directly or via the ICA. The area encompasses a sphere of influence 20 light years in radius with Sol at the centre. The UEF reserves the right to expand this sphere of influence and annex any colonies lying beyond its boundaries, up to and including all star systems in a 50 light year radius from Sol.

FEDERAL LAW ENFORCEMENT AUTHORITY:

Policing in the 23rd Century is handled by the Federal Law Enforcement Authority (FLEA). From their headquarters on Earth, and via many local stations throughout the Federal Colonies, Federal police officers have the unenviable task of tackling crime over interstellar distances.

FEDERAL NETWORK NEWS:

Think the BBC meets CNN in the 23rd Century. A quasi-autonomous organisation part-financed by the civilian population of the United Earth Federation, FNN is renowned for it.

FEDERAL NETWORK, THE:

The Federal Network, or FedNet, is the collective term for the technology behind the wirelessly-networked, ubiquitously-connected urban environment of the 23rd century. FedNet provides entertainment in the form of over a thousand digital television and radio channels, information in the form of the Interstellar Web (ISW), communications access for Personal ComLinks etc etc

This would be amazing if it were just on Earth, but a series of FTL Relay Stations throughout the Federal Colonies provides FedNet access to everyone who holds Citizenship in the United Earth Federation. While the citizens of the Sol system can enjoy realtime FedNet access, those further afield have time delays, as FTL datastreams travel at a maximum speed of 1 parsec per day. As a result, common information is stored locally at the larger colonies, and orbiting satellites allow wireless communications.



FEDERAL SECURITY AGENCY:

The Federal Security Agency (FSA) coordinates, directs, and performs highly specialised activities to protect the UEF government information systems and produce foreign signals intelligence information. A high technology organisation, the FSA is on the frontiers of communications and data processing. It is also one of the most important centres of foreign language analysis and research within the federal government.

FSA conducts some of the UEFs leading research and development programs. Some of the Agency's R&D projects have significantly advanced the state of the art in the scientific and business worlds.

FEDERAL SERVICE:

Students completing their education but not wanting to continue to a University are required by Federal law to take the Federal Orientation Test and complete three years of Federal Service. This involves working for the Federal Government in one of it's many branches, including the United Earth Armed Forces, the Federal Health Service, the Federal Transportation Network, and the Federal Labourforce. The pay isn't great, and choice of career path is limited depending on the results of the FOT, but completion of Federal Service usually gives an individual the option of staying on in their chosen profession with a salary increase.

FEDERAL STOCK EXCHANGE:

On 23rd November 2084, the World Bank declared bankruptcy, which caused the global economy to collapse. The formation of the United Earth Federation saw the introduction of Macro Economics, and the establishment of the Federal Stock Exchange (FSE), a global stock exchange through which all major commercial financial transactions happen.

FLASH CLONING:

Stem cell manipulation technology by which organs and limbs can be cloned from a patient and grown at an accelerated rate. See also Cloning.

FLEA:

See Federal Law Enforcement Authority.

FOAM-PHASE PLASMA WEAPONS:

Foam-phase plasma weapons provide a military commander the option of deploying a munition capable of delivering explosive power in the tactical nuclear yield without the radioactive after-effects.

The standard method of delivery of these weapons is via a missile tipped with a metallic hydrogen warhead. Within the warhead the hydrogen is kept in a meta-stable foam-plasma state inside an electro-magnetic bubble. On impact the bubble pops, and the contents expand rapidly, converting to a superheated plasma gas as the hydrogen returns to its normal state.

The explosive power of such a weapon is considerable. As such they are rarely deployed in planetary theatres of operation.

FOSCOLO DISCONTINUITY, THE:

An effect discovered by physicist Hugo Foscolo in the early 22nd century, the Foscolo Discontinuity refers to the warping effect on space-time caused by the interaction of the unique properties of Quantum Foam and intense gravity fields. When harnessed, this effect can be used to create what is termed a Foscolian Traversable Hyperspatial Link that connects two points in spacetime through an extra-dimensional region dubbed 'F-Space'.

Due to the topological features of the Foscolian Traversable Hyperspatial Link created by the Foscolo Discontinuity, the opening into F-Space is only accessible from Realspace for a short period and only from a precise angle of approach. Physics work differently in F-Space, allowing spacecraft to travel vast distances in a relatively short time period.

Often there is confusion about the idea that the Foscolo Discontinuity allows superluminal (faster-than-light) space travel. In fact there is no real superluminal travel involved. The time in which the distance was traveled appears faster because the subjective distance is shorter.

The calculations needed to navigate F-Space, which has been described as behaving in some ways like a complex turbulent storm-tossed sea, are almost impossibly complex for the human mind and are calculated using powerful computers developed by Artificial Life Inc.

FOSCOLO DRIVE:

The Foscolo Drive (or 'F-Drive') is the common name for the type of engine that allows spaceships to travel interstellar distances in a relatively short time period. A high-energy fusion reactor using Ununpentium (Element 115) as fuel powers a complex series of graviton beams, which in turn manipulate the Quantum Foam to create an effect now known as the Foscolo Discontinuity the opening of a Foscolian Traversable Hyperspatial Link that connects two points in spacetime through an extra-dimensional region dubbed 'F-Space'.



While in F-Space, the Foscolo Drive continues to function, generating a Foscolian Quantum Bubble around the ship, protecting it from the physics of this nine-dimensional region. The current generation of F-Drive engines allow ships to travel up to 6 parsecs of Realspace via F-space before requiring refueling, at an average rate of 1 parsec per standard Earth week (7 days Earth Standard Time).

The major limitation on usage of F-Space travel is positional inaccuracy upon emergence, more commonly known as Emergence Point Variance. F-Space has been described as behaving in some ways like a complex turbulent storm-tossed sea, and the calculation of the exact exit point from F-Space is impossible due to quantum currents and eddies.

This minimum inaccuracy is fixed regardless of distance travelled (perversely the maximum does increase with distance). Emergence Point Variance is usually measured in AU generally between 0.001 and 0.7 AU. This minimum error is minimal when compared with a jump of several lightyears, but for a short insystem jump renders the jump very difficult and dangerous, but not entirely impossible.

FOSCOLO, HUGO:

Famous physicist who discovered the effect now known as the Foscolo Discontinuity. Born 2030, European Federation, Earth. Died 2112 aged 82. Many rumours circulate on FedNet bulletin boards that Hugo Foscolo is in fact still alive, hidden in some government facility in cryogenic freeze, awaiting advances in medical technology that will cure him of Higgs Syndrome, the illness that officially killed him.

FOSSIL FUELS:

As nuclear fusion reactor techniques improved, fossil fuel burning was phased out. In the 23rd Century, all fossil fuel reserves are directed towards plastics industry, and there are strict laws regarding usage and recycling of plastics.

FREE MARS:

Political movement on Mars demanding devolution and self-rule.

FREE WORLDS ALLIANCE, THE:

A group of star systems in the region of space known as the 'Herculis Cluster'. Most of the discovered planets within their borders are resource-poor, causing the FWA to use transhumanism to adapt citizens to hostile worlds.

FRIGATE, TYPE 51:

The Type 51 Frigates were commissioned 20 years ago by the United Earth Armed Forces, and are still the prime movers of the Colonial Marine Corps.

FRIGATE, TYPE 71:

The Type 71 Frigates are the latest addition to the ICM strikeforce. Commissioned to replace the aging Type 51, the Type 71 is faster and better armed, but has a smaller cargo capacity.

FTL:

Acronym for Faster Than Light.

FTL COMMUNICATIONS:

See Quantum Communications

FUSION DRIVE:

Fusion rockets were first used to great effect in powering the Ares 3 Mars Mission in 2061. The Earth-Mars journey would have taken 259 days using a spaceship powered by chemical rockets, even with the 2 planets are in 'opposition' (Mars oppositions occur approximately once every 780 days). The fusion drive powering the Ares 3 cut this time to just 63 days (just over 2 months).

Fusion drive uses a fusion reactor to heat and eject the fuel in an 'impulse' which creates acceleration. Depending on the type and efficiency, the power of the specific impulse can vary.

The standard fusion rocket uses the D-3He fuel cycle, with bucking coils to extract a magnetic flux tube from a toroidal magnetic fusion reactor and exhaust the thrust. There were many technical difficulties to be overcome during the development period, especially involving magnetic field strength and the size and weight of the coils, and this engine only became practical with the invention of lightweight supercompact fusion reactors during the mid-21st century, almost 30 years after the first fusion reactor was built.



Fusion drives are still the most common form of propulsion in aerospace and interplanetary vessels, but in larger interstellar vessels, they have been all but superceded by the Boing Interstellar Reactionless Displacement Drive.

FUSION POWER:

See Nuclear Fusion.

FWA:

See Free Worlds Alliance.

FWA NEWS:

Pirate news channel broadcasting from out of the Herculis Cluster, which, despite their best efforts, the ICA has not been able to shut down.

With conflicting reports from official channels and independent news reporters of what is actually going on in this contested region of space, this is the only source of information direct from the rebels themselves. It provides an interesting alternate viewpoint of an ongoing war (or 'Police Action' as the ICA call it) where half-truths and propaganda are reported as fact.

GAUSS WEAPONS:

The ultimate development of the slug thrower, gauss weapons use a MLA (magnetic linear accelerator) to propel a projectile at incredible velocity. Velocity is directly proportional to barrel length: a gauss weapon of a given type will typically be substantially longer than a similar slugthrower, because of the need to maximize barrel length within acceptable parameters.

Generally speaking, ammunition for portable gauss weapons comes packed with a disposable battery of sufficient power to fire the entire clip. Ammunition is most often simple solid metal needles, but for those willing to pay, specialist ammo is also available: explosive, memory-form, poison, and illuminating rounds can be obtained. The clips come pre-loaded and sealed, and with the exception of tracer (which is normally loaded with solid shot at varying proportions), will usually be of an homogenous type.

GENETIC ENGINEERING:

In the 23rd Century, genetic engineering is big business. Correcting defective genes responsible for disease development through gene therapy has advanced to such a degree that most hereditary diseases can be easily and successfully diagnosed and treated.

It is not only in the medical sector that genetic engineering has advanced to such levels. Agricultural developments, like synthetic meat that is 'grown' in laboratory farms, and super-tough crops for use on harsh colony worlds have made those companies with stakes in the industry very rich indeed.

In the domestic market, cloning of pets is also big business, although since the Eckerley ruling of 2086, cloning human beings is illegal. It is now perfectly acceptable to have genetically modified pets (want a cat with blue fur? No problem) and for pharmaceutical companies to raise Pharm Animals – animals that produce commercially useful proteins. It should be stressed again that there are laws to ensure that these proteins can be extracted safely with minimum discomfort to the animals.

GHOSTERS:

These are the highly skilled hackers and forgers that create Ghosts. Those with a Ghost ID do not just have a spare fake ID. But an actual complete creation of a persons history. How far back this history goes depends on the money that is spent. Identity theft and manipulation is regarded as a serous offence and has a long prison sentence attached to the crime.

GRAVIDIUM:

Element 126 Gravidium, used principally in the photonics industry for its unique magneto-optical and piezoelectric properties and as a super-dense material in the manufacture of armour-penetrating projectiles.

Classed as "superheavy", Gravidium is 60% heavier than Uranium, the heaviest naturally occurring element (element 92). It is found in small but concentrated deposits, formed by as yet unknown selenological processes. Gravidium rich

planets and moons are highly prized, and as such the Megacorporations guard these locations greedily. Piracy is a constant threat, especially in the lawless Outer Rim Territories. It is not unknown for space pirates, or raiders from the Separatist systems of the FWA and ERc to ambush freighters laden with unrefined Gravidium, as they head for the industrial worlds in the Core Systems.

HCS:

See Holographic Crime Scene Capture System.

HELIUM-3:

Helium-3 is the fuel source that drives the fusion reactor powerplants of the 23rd century. It is a form of the element helium and is very rare on Earth. In the early 1970s, astronauts discovered quantities of it on the lunar surface. It originated from the sun and was carried to the Moon via solar wind. It has since been discovered on asteroids and moons throughout colonised space.

When combined in a fusion reactor with a form of hydrogen extracted from water, 1 ton of Helium-3 can supply the electrical needs of a city of about 10 million people. Researchers concluded in the early 21st century that there is enough Helium-3 on the Moon theoretically to provide the Earth's energy needs for at least 1,000 years.

Until humanity switched to nuclear fusion as the major source of power in the mid-21st century, over 90% of the world's primary energy supply came from fossil fuel-driven sources.

HERCULIS CLUSTER, THE:

Sector of space with a high concentration of resource-rich and habitable star systems in close proximity to each other, approximately 25 light years from Sol. The Hercules Cluster had been a relatively autonomous zone ever since EnerTek, the company that funded the majority of the region's colonisation projects, declared bankruptcy in 2246. EnerTek subsequently collapsed in a scandal involving billions of EuroDollars in losses, corporate power abuse and attempted blackmail of ITC officials.



With EnerTek's assets frozen during ensuing investigation, the Hercules Cluster was allowed a degree regional autonomy by the ICA to self-govern, a decision that is now probably regretted in the corridors of power on Earth.

EnerTek's colonial assets were acquired by the Hallidor Corporation in 2254. Many people believe that it was this megacorporation's overeagerness to gain access to the abundant natural resources in the Hercules Cluster that fanned the flames of sedition and indirectly brought about the Colonial Wars.

HESTIANS:

Arising from the chaos at the end of the 22nd Century, the Hestians are part of the 'decivilisation' movement that has existed since the 20th Century (or could even be considered to extend further back, if a more generous definition is used). As a reaction to the 'threats posed by technologies that Man seems unable to use peacefully' and 'the dehumanization of the average man and woman in the face of sprawling cities and faceless corporations,' the Hestians embraced a philosophy of self-reliant frontier living, somewhat of a romantic reimagining of the North American West in the 1800s. Their beliefs are not strictly religious, but spiritual, putting a strong emphasis on self-reliance, individualism, limited environmental impact, and pre-industrial trades. While they use limited amounts of electricity, generally it is generated through relatively simple processes, such as water or wind power, and used sparingly.

In their early years, the Hestians formed small communities on the less populated but still habitable Core Worlds, such as Proxima II, Hesperus, and Groombridge, trying to stay away from the major colonies and live on their own. Many of their colonies did not survive, wiped out by natural disasters or failures of various vital technologies; others ran into problems when valuable natural resources were discovered nearby and they suddenly became packed with outsiders and corporate officers seeking to expand operations. For instance, the Hestian colony on Groombridge was abandoned in 2253, when the ICM depot on the planet was built not more than 100 kilometers away.

When the ICA began pushing for colonists to settle the distant worlds of the Outer Rim as a bulwark against the newly-independent ERC and FWA, leaders of the movement suggested that the Hestians establish colonies on a more habitable world in the Outer Rim, far from the predations of the megacorporations and the UEF government. While many members of the movement decided to stay where they were, most of the movement and its leadership began gathering investment and planning a move out into the Rim.

HOLOGRAPHIC CRIME SCENE CAPTURE SYSTEM:

For numerous reasons it's not always possible to maintain or keep a crime scene closed off on a colony. For example: A suicide by drowning in a vital water supply tank on a small colony. The Holographic Crime Scene Capture System (HCS) is a practical method of recording an accurate picture of vulnerable crime scenes. The scene of crime officers take detailed holographic pictures of the scene as they collect physical evidence. Then after the details are collated the data can be assimilated to construct a holographic representation of the scene, to be duplicated in the analysis rooms of the main Colsec offices.



By the 23rd century holographic technology such as this is not expensive, but it is bulky and power consuming, and as such not all Colsec offices are fitted with a HCS chamber.

Holographic crime scenes are recorded as high-resolution digital data to allow Colsec officers to zoom in and minutely examine every aspect. The scene can also be scaled down to much lower resolutions to get an overall view of a crime scene.

HOLOGRAPHIC POSITIONAL REFERENCE:

A piece of law enforcement tech, this device is for use on closed crime scenes where the body has been removed for forensic analysis. When activated it projects a holographic picture of the corpse (and any separate parts) in its death position. The body can be a true to life representation of the corpse, or a dark shadowy shape. The device itself is disc shaped and about 2.5cm thick, which sits nicely in the palm of the hand. It can be voice activated and sits in the centre of the Corpse.

ICA:

See Interstellar Colonial Authority.

ID-CARDS:

All citizens of the Federation are required by law to carry an ID card. This card carries biometric information such as retina print, genetic fingerprint etc. When FedPol Officers arrest a suspect, their retina and dna are checked, to make sure it matches those on file in Zurich.

IDENTIFICATION:

In the 23rd century, most retail outlets use a combination of ID-Card and biometric retina scan to verify an individual's identity. If both match, the transaction is performed, and the individual's bank account is debited the cost of goods purchased.

ILLEGALS:

Due to the strict regulations of colonial emigration there is, of course, a service available for those who wish to enter illegally. People smuggling is serious problem for the police and a lucrative business for criminals. These criminals often employ the services of a Ghoster, to set up new identities. However these illegals are playing with fire as they are dealing with serious criminals. There have been rumours of illegal's having their money taken from them, and then thrown out into deep space a week or two into their journey. Also if an illegal is caught they face deportation or possible prison.

INDIG:

UEF military slang for 'indigenous', used to describe the locals or local forces on a colony world.

INTERSTELLAR COLONIAL AUTHORITY, THE:

Formed after the Colonial Act of 2140, the Interstellar Colonial Authority (ICA), is a branch of Federal Government tasked with the government of colonised space beyond Sol. With it's headquarters in Viking City on Mars, the ICA is responsible for the day to day management of the colonies, including local law and order, liaison with Earth, communications, logistics and a host of other functions. In the absence of direct contact with Earth, the ICA has veto on any local government decisions. For more details see Federal Government: ICA.

INTERSTELLAR TRADE COMMISSION, THE:

The Interstellar Trade Commission (ITC) came into being in 2140, when, in an effort to regulate interstellar commercial shipping and trade, the WTO was radically expanded and remodelled. The ITC is the primary body dealing with commerce throughout the systems colonised by the UEF in the 23rd century. All crewmembers of commercial transport and cargo starships are required by Federal law to possess a valid ITC licence. For more details see Federal Government: ITC.

ITC:

See Interstellar Trade Commission.

JAPANCORPS:

Section of the United Earth Armed Forces supplied by the Japanese Affiliates. JapanCorps soldiers wear both the UEF flag and the Japanese Affiliates flag as shoulder patches on one arm, and their unit insignia on the other.

JOVAD:

The Circum-Jove Administration was established in 2200. Modelled after the Martian Administration, it provides the colonies with a political voice in the General Assembly on Earth. The CJA (or Jovad, as it is often called) manages the day-to-day running of government in the Circum-Jove colonies. The administration has devolved a lot of local government to locally-elected councils on the Galilean Moons. The CJA and various corporate concerns are guaranteed non-voting seats on these councils.

Prior to the formation of the CJA, Jovian Project was managed by a branch of the UEF government named the Circum-Jove Development Corporation. Historians now cite mismanagement of the Circum-Jove economy and the gross mishandling of the Callisto Dockers' Strikes of 2170-71 as the factors that brought an end to direct government of the Circum-Jove from Earth via this body.

JOVIAN HOLDINGS:

Origins: American
Sectors: Mining
Ownership: A subsidiary of Hallidor Corporation
HQ: Sarpedon, Europa, Circum-Jove

Jovian Holdings is a mining company owned by Hallidor which operates in the Circum-Jove system. As well as its headquarters in Sarpedon, the company has regional offices in both Acallaris City on Ganymede and Midgard City on Callisto.

It was incorporated in June 2118.



JUMP:

Slang term for an interstellar journey using a Foscolo Star Drive (F-Drive). e.g. 'We just made the jump from Sol to Proxima'.

KINETIC WEAPONS:

Kinetic weapons, or slug throwers, are defined as those weapons that rely upon speed and hardness to deliver their destructive punch.

In the 23rd Century, slug throwers are still the mainstay of most military organisations, although energy weapons are becoming more and more commonplace.

KUIPER BELT:

A region of space extending from Neptune's orbit out to about 55 AU, lightly populated with asteroids, comets, and dwarf planets.

LAGRANGE POINT:

One of five areas in respect to a small planetary body orbiting a larger one in which the gravitational forces of those two bodies are neutralized. Lagrange points are considered stable and ideal locations for habitats.

LANGUAGE:

Though a multitude of languages still exist in use on Earth, the most common languages in use in the colonies are English and Mandarin Chinese. This is mainly because the most powerful colonial powers are the United Americas and the Chinese Consortium. These languages have also become the 'official' languages of the United Earth Federation.

LAW:

See 23rd Century Life: Law for more details.

LIGHT SECOND:

A Light Second is defined as the distance light travels in an absolute vacuum in one second i.e. 299,792.458 kilometres. This unit of length is used along with the Light Minute, Light Hour and Light Day to describe distances in interplanetary rather than interstellar space.

Of course with one Light Second equating to a distance of almost 300 000 km, smaller units of measurement are required. It is common practice for Light Seconds to be split into centi-seconds, or hundredths of a second. Each centi-light second is a distance of 2997.92km.

Anything below 3000km is usually referred to in km or m.

A light minute is 60 light seconds and a light hour is 60 light minutes or 3600 light seconds. A light year is 31,557,600 light seconds.

Some distances in light seconds:

- The average distance from the Earth to the Moon is 1.282 light seconds.
- The average distance from the Earth to the Sun (or 1 astronomical unit) is 499.0 light seconds or 8.317 light minutes.
- The distance from the Earth to the main Belt varies from 2.2 to 3.2 astronomical units.
- The Kuiper belt extends between 40 and 48 astronomical units.
- Light Second: 299 792.5 km.
- Light Minute: 17 987 547.5 km.
- Light Hour: 1 079 252 848.8 km.
- A light-day is about 173 astronomical units.
- A light-year is equivalent to about 63 000 astronomical units or 9.46 trillion km.
- A parsec is approximately equal to 3.26 light-years or 206 000 astronomical units, i. e. 30.9 trillion km.



LOONIE:

Derogatory term used on Earth to describe Luna Colonists. Also Lunatics, Loons.

MAIN BELT, THE:

The main asteroid belt is a region of space located between the orbits of Mars and Jupiter, typically starting around 2.1 astronomical units (AU) from the Sun, where a large number of asteroids are found. These asteroids are remnants from the early formation of the solar system and are considered part of its minor bodies. The main asteroid belt is characterized by a collection of irregularly shaped bodies ranging in size from small rocky fragments to dwarf planets.

MARSCORPS:

MarsCorps was established in 2146 by the UEF after a bomb planted by Earth Isolationist terrorists killed 87 colonists in Viking City on Mars.

Initially a battalion strength garrison force, in the 125 years since it's conception MarsCorps has grown into the United Earth Army Mars, which alongside EarthCorps forms the backbone of the Sol Defence Force.

MarsCorps comprises 3 divisions of infantry (including a brigade of mobile infantry), and armoured division, and an aerospace wing based based at Ares Fleet Base, Phobos.



MARVIN:

Derogatory term used on Earth to describe Mars colonists.

MASS COUNTERS:

The only form of sensor that works while in F-Space is a mass counter. A mass counter detects gravity wells in the vicinity of the ship, enabling the ship's navigation computers avoid dropping the ship back into Realspace inside a planet or star.

Mass Counters are usually programmed to prevent a ship emerging from F-Space any closer than 100 planetary diameters from any stellar mass of moon size or greater.

MAUNDER MINOR:

Maunder Minor is the name given to the period from 2120 to 2146 when Earth's sun dimmed, repeating a behaviour first exhibited in the seventeenth century (called the Maunder Minimum), though this time to a much lesser extent.

During this 26 year period the economies of those nations of Earth who relied heavily on solar power found it hard to adjust, with agriculture and power-generation severely handicapped. The resultant social upheaval forced many to leave Earth and start new lives offworld, as colonist-workers in the fledgling Jovian and Saturn colonies.

It is named after the later solar astronomer E.W. Maunder who discovered the dearth of sunspots during that period by studying records from those years.

MEDICINE:

Nanomedicine is the medical application of nanotechnology. Nanomedicine ranges from the medical applications of nanomaterials and biological devices, to nanoelectronic biosensors, and even possible future applications of molecular nanotechnology such as biological machines.

MEME:

A viral idea. A unit of information transmitted socially that self-replicates and mutates in a manner analagous to genes.

MESH, THE:

The mesh is a decentralized internet-of-things. Miniature computerized devices with advanced processing and storage capabilities are everywhere: your clothes, your weapons, your appliances, and throughout the structures, environment, and even air around you. This everywhere is equipped with minute sensors for monitoring the environment and wireless radios, microwave links, or laser links for communicating. All of these devices network together. Each acts as an ad-hoc server and repeater, passing messages and data along from sender to recipient. Though larger backbone servers still exist, especially in larger habitats with heavy traffic, there is no longer a need for any kind of centralized infrastructure. If a node in the mesh network goes down or cuts off traffic, the data simply routes around it, finding a new path to its destination. This makes the mesh easily expandable for new colonies, resilient against harm in crisis scenarios, and resistant to censorship and other forms of centralized control.

MESH ID:

The unique signifier for every device on the mesh, used for communication and tracking.

MILITARY SCIENCES SPECIAL ACTIVITIES DIVISION:

A Black Ops unit attached to the Federal Government's shadowy Military Sciences Division.

They are essentially an elite paramilitary force operating outside of the main UEAF chain of command. Potential members are screened during their recruitment into the organisation from other UEAF units for possession of a certain psych profile. Moral flexibility would be the best way to describe it. Obviously anything the MiliSci Special Activities Division does is classified. They perform many morally questionable duties.

NANOTECHNOLOGY:

Nanotech enjoys limited use but has never made it into the big time as posited by many science fiction authors of the 20th century. Nanomachines only work well in sterile, controlled environments, as significant amounts of background radiation produce a rapid degradation in their ability. They also have very limited memory and can only set up for simple non-repetitive tasks. What they are good at is assembling simple components at the molecular level.

The fear that nanomachines would escape and run riot never materialised. In the big world outside of the specialist construction laboratories called NanoForges, they are just totally outclassed. Temperature fluctuations, everyday contaminants such as dust and various forms of radiation all contribute to their rapid demise. The microscopic molecular components of computers and AI's, and the vast carbon nanotubes of the space tethers could not be manufactured without nanobots.

NAVIGATION GUIDANCE SIGNAL:

More commonly referred to as a T Beam (traffic beam), the Navigation Guidance Signal is used on larger colonies and space ports to control the movement of space ships in tight confines. A Space port sends out a string of transmissions, like an invisible web, with each signal unique to a ship. The pilot/autopilot can use this signal to navigate through busy spaceship traffic in a port.

A fully automated version can be set up in large asteroid or debris fields to help ships navigate a safe path through.

Military space craft use a version for navigating through 'friendly' minefields set up around planets, or some bases. In this case millions of encrypted T Beams signals are projected out and the ships computer decodes the correct beam and follows it in.

NEEDLECAST:

Term used for FTL communications transmission across interplanetary and interstellar distances. See FTL Communications.

NUCLEAR FISSION:

A process where energy is created when a free neutron bombards the nuclei of plutonium or uranium, causing the atom to split, and send fragments bombarding into other nuclei, causing a chain reaction. See also: atom bomb, fission fuels. Humanity experimented with nuclear fission as a power source in the latter half of the 20th Century, but after several accidents and public safety concerns, it was abandoned.

NUCLEAR FUSION:

Discovered in 2031 by a consortium of scientists from across the globe, nuclear fusion is best defined as the combining of light nuclei into heavier ones, with the release of great amounts of energy as used in the hydrogen bomb. This energy is far greater than the binding energy liberated in the "splitting", or fission, of the heavy nuclei in a fission reactor.

Helium-3 is the fuel source that drives the fusion reactor powerplants of the 23rd century. It is a form of the element helium and is very rare on Earth. When combined in a fusion reactor with a form of hydrogen extracted from water called deuterium, 1 ton of Helium-3 can supply the electrical needs of a city of about 10 million people for centuries.

Large quantities of Helium-3 exist on Luna, Earth's moon.

OORT CLOUD, THE:

The Oort Cloud is a hypothesized, spherical region of icy objects located far beyond the orbit of Pluto and the Kuiper Belt. The Oort Cloud is thought to be the source of long-period comets, which have highly elliptical orbits that bring them close to the Sun.

OUTER COLONIES, THE:

Stretching from the outer edge of the Core System, to a distance of 20 light years from Earth, the Outer Colonies region of space is colonised by the most economically powerful member-states of the UEF: the United Americas; Chinese Consortium; European Union; Japanese Affiliates, and the Russian Federation, as well as several private organisations.

All colonial ventures in this region are financially backed by one or more megacorporations.

The Outer Colonies fall under the jurisdiction of the Interstellar Colonial Authority, a division of the UEF formed in 2140 after the Tau Ceti War.



OUTER RIM TERRITORIES, THE:

Region of space stretching from the outer borders of the Outer Colonies to a distance of approximately 50 light years from Earth. The Outer Rim Territories, are colonised by the megacorporations without any direct UEF member state involvement. The furthest edges of colonised space is often referred to as 'The Frontier', and in many ways is like the old Wild West. It can be a dangerous, lawless place, as the only star systems with anything like a substantial UEF/ICA presence are those bordering the breakaway regions of space formed after the Colonial Wars.

PARSEC:

One parsec is defined as the distance at which an object has a parallax angle of one arcsecond as observed from Earth. Parallax is the apparent shift in the position of a nearby object when viewed from different locations. In the case of astronomical measurements, the baseline for parallax is the distance between the Earth and the Sun.

The exact value of one parsec is approximately 3.26 light-years.

PENAL COLONIES:

For those criminals with a knack for escaping from even the most secure prison facilities, and those individuals the government wants to be rid of permanently, a life-sentence to a penal colony is usually the most common solution. Penal colonies are typically Class 3 Colony worlds, requiring decades of terraforming work. A prisoner sentenced to such a place faces a bleak life of mining planetary resources or maintaining the terraforming machinery, under the watchful eyes of a small team of wardens. Revolt is discouraged by withholding of supplies.

Other common forms of punishment include:

- Prison
- Behavioural alteration

PENAL INVOLUNTARY SERVITUDE:

A form of involuntary servitude has existed since the Colonial Act of 2140 amended the Geneva Statute of 2084, allowing the Federal government the authority to sell the contracts of individual prisoners to private corporations. The prisoner then becomes the property of the corporation, who has the right to set the prisoner to work, usually at those tasks deemed unpopular and dangerous by the corporation.

Penal Involuntary Servitude makes financial and economic sense for both the UEF government and those megacorporations involved in colony management: the UEF cannot afford to maintain and supply large numbers of prisons on every major colony world, and the megacorporations gain access to a large supply of cheap labour.

Penal Involuntary Servitude does sometimes have advantages. Criminals who manage to work off their sentence through this system usually receive help starting a new life in the colonies by their former keepers.

The prison slang for Penal Indentured Servitude is 'doing a piss', which comes from the initials PIS.

PSYCHIC OPERATIONS GROUP:

Branch of the UEAF recruited directly from the Metasensory Academy. Also referred to as PsiCorps. POG is mostly an organisational structure, as operatives are usually assigned to other line units as needed.

The Psychic Operations Group is headquartered at Fort Alexander, Hecates Tholus, Mars.

PUNISHMENT:

Punishments vary from incarceration in prison, being 'chipped' and placed under curfew at home, to exile to a penal colony. Although no death penalty exists, it is common knowledge that FLEA officers have a 'shoot to kill' policy with dangerous suspects.

Common forms of punishment include:

- Prison
- Penal Colonies
- Behavioural alteration

QUANTUM COMMUNICATIONS:

To accelerate an object beyond the speed of light is impossible (in the context of this entry, FTL refers to c , a constant equal to the speed of light in a vacuum, roughly 300,000 kilometres per second), but interplanetary and interstellar communications rely on the unusual properties associated with quantum entanglement. When the quantum properties of particles such as photons, become entangled, they behave like psychic twins. Even if they are separated by vast interplanetary or interstellar distances, a disturbance to one affects the other. If changes are made to one of the pair, they are reflected in the other. Scientists in the early 22nd century discovered that this effect still experiences a delay, as the spooky interaction between the particles ripples through space-time at a rate of 1 parsec per Earth Standard Day.

Information transmitted using a quantum communications array can travel at a maximum speed of 1 parsec per standard day (24 earth hours).

Since the mid 21st century, all interplanetary and interstellar vessels have been equipped with quantum communication arrays. All such communications (usually referred to as needlecasts, due to the shape of quantum communications antenna) include a location and time stamp, which allows a ship's position to be calculated at broadcast time. This system is called UPS the Universal Positioning System. Within the core systems it can track a ship's position down to a few hundred thousand kilometres.

REACTIONLESS DISPLACEMENT DRIVE:

Vacuum is known to contain enormous amounts of energy that might be tapped (zero point energy, or ZPE). Up until the end of the 21st century this was widely believed to be impossible, but a physicist named Hugo Foscolo changed that. The Foscolo Discontinuity vastly expanded understanding of unified field theory and it slowly became apparent that there were loopholes that could be exploited.

The Reactionless Displacement Drive exploits one such loophole, manipulating certain nuclear structures which enables Zero Point Energy to be 'borrowed' for an extended period of time. The Zero Point Energy is used to generate an electromagnetic energy flow. Electro-mechanical displacement of said flow produces a net unidirectional displacement without *local* reaction. The momentum of the mass of the spacecraft utilising such a propulsion method reacts with the surrounding vacuum, gradually returning the borrowed energy to the Zero Point Field.

Though the drive obviously relies upon a power source to manipulate the Zero Point Field, it is a purely electrical propulsion system requiring *no* reaction mass, i.e.: no propellant of any kind.

Zero Point Energy cannot be used as a normal energy source, as the energy always has to be "returned" to the vacuum for the process to work.

REALSPACE:

A term used by interstellar travellers when referring to the 'normal' space we exist in, to differentiate between it and the extra-dimensional region known as F-Space that connects the two mouths of a wormhole.

RED DRAGON:

An organised crime syndicate, with a background in both the Chinese Consortium and the Russian Republic, known to trade with the Eurasian Rimworlds Combine.

RELAY STATION:

Quantum communications are not without their limits. Information integrity begins to degrade over distances greater than approximately 10 light years. Beyond this distance, some as yet unidentified effect of quantum entanglement introduces

information corruption. To avoid this, the Federal Communications Network utilises 'nodes' large relay stations that collect, store, filter/repair and forward communications on to the final destination. So a needlecast from Earth to the Outer Rim would 'hop' via several relay stations, each of which would re-compile the data and boost it onwards.

A relay station is an orbital affair, typically positioned at a planetary Lagrange point to allow a stable orbit. They are mostly automated, running Gamma level AI with a small caretaker crew. Star systems housing the most strategically important and heavily used relay stations always have a military presence to deter pirates and saboteurs from trying to destroy or hack the station. At colonies with heavily used relay stations the information is usually backed-up at a planetside location at regular intervals.

RELIGION:

As long as humanity needs answers to the unanswerable, there will be religion. All the major religions of the 21st century are still going strong, with a few notable additions. One of the fastest growing religions in the 23rd century is Chrislam – an amalgamation of Christianity and Islam that occurred during the Second Exodus (2166-96) from Earth. Chrislam is a very popular religion in the colonies, though it has made little headway on Earth.

Known religions and cults include:

- Chrislam
- Christianity
- Islam

SDF:

The collective name for space vessels of the UEAF assigned to defend the Sol system against aggressors. The SDF are the 1st Fleet of the United Earth Federation Space Command.

SEX-SYNTHS:

With the advent of anatomically correct models, several wealthier brothels in the core worlds invested in androids. Though initially expensive, androids have a much lower overall upkeep than human prostitutes, making their long-term value higher.

This sparked some controversy as many government and religious authorities considered sexual activity with androids to be morally deplorable – unusual considering under the law, androids used in this fashion are no more than expensive and realistic sex-toys. Under this pressure, many of these early Sex-Synth brothels liquidated their android prostitutes.

No lasting legislation ever came into being, though to this day there is a social taboo associated with the practice of owning, or retaining the services of an android for sexual purposes. Regardless, the business can be lucrative – especially considering androids have no legal standing – and many brothels offer "Special Sex Toy Services" to discreet clients.

SKYCAR:

This is a catch-all name for the suborbitals which are capable of street driving, vertical lift-off, hovering and high-speed cruising. The skycar employs a dual-propulsion method, using a rechargeable electric engine when on the ground, and up to four vectored thrust engines powered by a super-compact fusion reactor when engaged in atmospheric flight.

SOL DEFENCE FORCE:

The collective name for space vessels of the UEAF assigned to defend the Sol system against aggressors. The SDF are the 1st Fleet of the United Earth Federation Space Command.

SPACE TETHER:

A Space Tether is a rigid structure running from the equator of a planet to a synchronous orbit and then on out to a counterweight. Space Tethers are a cheap way to move loads to and from orbit, but their construction is extremely expensive. It realises the goal of replacing rocket propulsion with the traversal of a fixed structure via a mechanism not unlike an elevator in order to move material into or beyond orbit.



Earth actually has not one but two functioning Space Tethers. The United American Space Tether is based on a mountain in equatorial Ecuador, while the Central African Space Tether has its base on a mountain in Western Uganda. Construction on the tethers was completed in the late 22nd century, and both have large transit centres, with maglev train stations, aerospace and suborbital landing zones and hotels. They have some Extrality privileges, such as the availability of duty-free goods from the colonies, but are still subject to Earth law. Each base station has high security and a marine barracks close by.

The tethers themselves are constructed from carbon nanotubes embedded in foamed plasteel and carry twin magnetic induction tracks resembling vertical monorails. These run from the ground station to the orbital station. The journey from the surface up to the orbital station takes approximately six hours.

Each tether has an orbital station, in a geosynchronous orbit 36,000km above Earth. These have extensive orbital facilities including large cargo docks where interplanetary freighters are loaded and unloaded, a transport terminus for the tether shuttle capsules, and hangar bays from where a frequent shuttle service runs to Unity Space Station and Luna. The stations also each have a small contingent of marines and private security force.

From the orbital stations the tethers then run up into space another 64,000km to a small asteroid. As the planet rotates, the inertia at the asteroid end of the tether counteracts gravity and keeps the cable taut via centrifugal force. Both asteroids are covered in communications relay equipment.

SPACECORPS:

Branch of the UEAF that incorporates naval fleet units, marine corps and other associated ancillary organisations.

SUBORBITAL:

Generic term for the vast array of atmospheric flying vehicles designed to be used in a planet's gravity well, from the small civilian skycars up to the large passenger scramjets that hug low earth orbit during their intercontinental flights. While the larger freight transports and passenger suborbitals are capable of very high flight ceilings, civilian models usually have an absolute maximum cruise altitude of 5000m at most.

Suborbitals are expensive pieces of technology, especially the small skycars, and as such can only usually be afforded by the military, government agencies, and the high-ranking corporate elite. A suborbital pilot licence is required to operate one, and access to these licenses for civilians is notoriously difficult. Suborbitals have made the helicopter obsolete in the 23rd century.

SYNTHS:

Standard androids that are designed to look humanoid, though they are usually noticeably not human.

SYNTHOPHILIA:

A fetish for engaging in sexual congress exclusively with androids. Synthophilia was first classified in the late 22nd century as androids became more widespread.

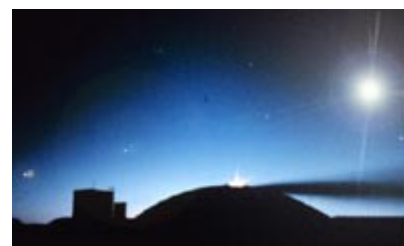
T BEAM:

See Navigation Guidance Signal.

TERRAFORMING:

The lack of habitable worlds within a short distance of the Earth has encouraged the development of marginal worlds and the creation of small colonies by corporations.

Potential colony worlds can be colonised over a period of decades by reducing the unbreathable components of their atmospheres and increasing the levels of breathable gasses such as oxygen. Two techniques are used to do this. First, it is possible to establish ecological architectures which are usually specific mosses, grasses, and small flowering plants to convert certain gases in the atmosphere (mainly the carbon dioxide) into usable oxygen. The second technique is to supplement this long-term strategy with a number of atmosphere processing stations.



An atmosphere processor is a cone-shaped tower, about 1500 metres high. It is powered by a 1.0 Terawatt fusion reactor, and it draws into the planetary atmosphere through a series of louvers in the bases and sides. This atmosphere is then drawn up through a series of hot mass processors arranged in a ring around the fusion core. Each of the processors can draw into the atmosphere through a battery of turbines, which compresses the accelerates the gas. This is then passed through a high temperature electrical arc which heats the gases and ionizes it. The magnetic coils then heat the gas to near plasma temperatures in around 5,000 degrees Kelvin, and the molecules within the gases are dissociated into their component atoms. The hot streams of monatomic gas are then sorted by a series of magnetic fields into constituent elements. Some of these (such as carbon) can be drawn off as a waste by-product (such as graphite dust), while the remaining hydrogen, nitrogen, and oxygen atoms are expelled back into the atmosphere, where they can cool to form as hydrogen, nitrogen, and oxygen.

TRAFFIC CONTROL SYSTEM:

Also referred to as 'TCS' or 'Trafcom', this is a fully computerised traffic network linked to onboard computers inside the main drive systems of ground cars. It is often used in the larger cities and colonies to regulate, monitor and track the flow of traffic. On some colonies it is a legal necessity to use the TCS on the large slip roads and autobahns.

Vehicle autopilot systems are essentially slaved to the TCS mainframe and movement and speed is taken out of the control of the driver. Law enforcement can access the system to stop a vehicle, or pull one over if necessary. It is not uncommon during police/medical/fire emergencies for one lane to be cleared to give an emergency vehicle a clear path. Some criminals 'chisel' their vehicle to get around the system.

TRANSHUMANISM:

Transhumanism is a term used synonymously to mean “human enhancement.” It is an international cultural and intellectual movement that endorses the use of science and technology to enhance the human condition, both mentally and physically. In support of this, transhumanism also embraces using emerging technologies to eliminate the undesirable elements of the human condition such as aging, disabilities, diseases, and involuntary death. Many transhumanists believe these technologies will be arriving in our near future at an exponentially accelerated pace and work to promote universal access to and democratic control. In the long scheme of things, transhumanism can also be considered the transitional period between the current human condition and an entity so far advanced in capabilities (both physical and mental faculties) as to merit the label “posthuman.”

UEF:

See United Earth Federation.

UNITED EARTH ARMED FORCES, THE:

The military arm of the United Earth Federation, tasked with defending Earth and the Federal Colonies against any and all outside aggressors.

UNITED EARTH FEDERATION, THE:

Name for the global consortium of nations that has governed Earth since 2085. See the site pages on Federal Government for more information.

The United Earth Federation has direct control over the Core Systems, and controls the Outer Colonies via the ICA.

UNITY SPACE STATION:

Built on and in an asteroid that was towed from the Asteroid Belt to L1 Earth orbit in the early 22nd century, Unity Space Station is over 5km across at it's widest point.

Now, all ships arriving at Earth must pass through the Orbital Customs & Excise location at Unity Space Station Spaceport. Here they must strip and be decontaminated (same goes for belongings). Transportation of any undeclared organic substance that is alien in origin is illegal. All such items must pass through ITC Quarantine to make sure it is safe and will not contaminate Earth's biosphere.



UNUNPENTIUM:

Ununpentium, or element 115, is the primary fuel used in fusion reactors powering F-Drives. While more common elements such as deuterium or helium-3 are used in normal fusion reactors, the immense amount of energy required to create the Foscolo Discontinuity makes it necessary to use a special kind of fuel source. This is where Ununpentium comes in.

Ununpentium is very expensive to manufacture artificially, but it occurs in a natural, stable state in the heart of stars, and is thrown out as cosmic debris.

A spacecraft using a Ununpentium powered F-Drive can make a wormhole 'jump' up to a distance of 6 parsecs, before the reactor needs refuelling.

UPP:

see Union of Progressive Peoples.

UNION OF PROGRESSIVE PEOPLES:

The Union of Progressive Peoples was a wide-reaching and powerful socialist human federation. It was formed in 2208-2209 by a coalition of colonies led by Germany, Spain, and Russia. Notably, the Union of Progressive Peoples was the only major federation of its era not to be influenced by corporate concerns, a fact that often put it at odds with its rivals the United Americas.

The UPP was a powerful socialist block that controlled a vast, albeit resource-poor sector of space, with a minimal presence on the Core systems to major presence in the Outer Rim Territories and the Frontier. Virtually since its formation, the UPP was locked in a state of cold war with the United Americas, and although behind its rivals in the space and arms race, they still maintained a formidable interstellar fighting force.



VIKING CITY, MARS:

Built on the site of the Viking II lander site at the northernmost edge of Utopia Planitia, Viking City is home to over 10 million colonists, and is a vast urban sprawl of buildings that all follow the basic pyramidal design common on Mars. A lot of the older buildings at the site can be completely pressurised, a reminder of the early years of the colony when the atmosphere of Mars was still far from breathable. Mars only has one third the gravity of Earth. To compensate for this, all large colony buildings are equipped with Field Generators (the same kind that large interstellar craft use) that create a standard 0.8g artificial gravity field.

Being the oldest colonial settlement on the planet and location of all major government and corporate buildings, Viking City is nominally accepted as being capital city of the Mars Colony. Viking Spaceport is the largest spaceport on Mars, and has an accompanying orbital facility for the large interstellar craft.

WELLS:

Home to over 7 million, Wells is the third largest city on Mars, after Viking City and Anchorpoint.

It is located in the Argyre Planitia basin in the southern highlands of Mars. The Argyre basin is approximately 1800km wide and drops 5.2km below the surrounding plains. The crater was formed by a giant impact during the Heavy Bombardment period of the early Solar System. This means the impact that created Argyre Planitia is thought to have occurred 3.9 billion years ago.

After extensive terraforming, the basin of the Argyre Planitia is now green with vegetation, fed by water flowing from the Borealis Sea and the Valles Marineris. Apart from Viking City and Anchorpoint, Wells has the only large spaceport on Mars.

WEST AFRICAN PROTECTORATE:

A loosely-affiliated group of African nations formed in the early 22nd century, the future initially looked bright for the West African Protectorate. Then in 2120 Maunder Minor hit, which brought about the economic collapse of those equatorial powers who relied heavily on solar power, including the nations of the Protectorate. The resultant social upheaval forces many to look to find work offworld, as colonist-workers in the fledgling Jovian and Saturn colonies. The nations they left behind quickly dissolved into civil war.

Over the next century and a half, the West African Protectorate would suffer a series of bloody civil wars, which effectively caused the nations involved to become poorer than they were before Maunder Minor.

The last war ended in 2256, when the use of battlefield tactical nuclear weapons was the last straw for the UEF, who immediately mobilised and sent in an intervention force to stop the fighting. A peacekeeping force supplied by the African Defence Force (the army of the Central African Bloc) has so far succeeded in preventing another war flaring up, while rebuilding efforts continue apace.

VOIGT-KAMPFF MACHINE:

A very advanced form of lie detector that measures contractions of the iris muscle and the presence of invisible airborne particles emitted from the body. The bellows were designed for the latter function and give the machine the menacing air of a sinister insect. The VK is used primarily by Blade Runners to determine if a suspect is truly human by measuring the degree of his empathic response through carefully worded questions and statements.

WORM:

See Earthworm.

ZURICH DATA CENTRE, THE:

One of the most secure places on Earth. This is the central data repository for information about citizens of the Federation. Zurich-1, an advanced AI mainframe 1.5km beneath the surface manages this vast library of information, which has details on credit transactions, health, employment history, criminal records, shopping habits... in fact any action that can be recorded digitally about an individual's life is stored here. The central database servers are not directly connected to the Federal Network, preventing any unauthorised access attempts.



Bitter Wind

A short, introductory adventure to New Horizon

by Michael C. Labossiere

additional material by John Ossoway

"The sun vanished, the ice began to move again. Dark and horrible shapes are moving across the ice behind which moves something large... something inhumanly large..."

Last message of the Pierce Europa Research Outpost

This adventure details the terrifying events that lead up to that last, terrible transmission from the Pierce Research Outpost established on the sixth moon of Jupiter.

In this scenario, everyone dies. This is a one-time adventure with pre-generated characters. While the adventurers do inevitably die, the important part of the adventure is to convey to the players the tone and feeling of this time period and to give them a chilling story they can share with other players. The most important job of the Game Master is to set the proper mood to prepare the players for the New Horizon setting and atmosphere.

Timeline

The following time line details the events leading up to the adventure. Some of this information may become available to the adventurers in the course of the scenario.

2020-2024:

The Jovian Explorer mission launched by the European Space Agency makes detailed observations of Europa, deploying a compact robotic microprobe onto the moon to perform on-the-spot measurement of the ice crust. The probe establishes the existence of liquid water beneath the surface.

2118:

The second wave of Jovian Project ships – consisting of cargo transports and colonial support ships in the main – begin arriving in the Jupiter system. Valhalla Base is established on the Galilean moon Callisto. It will serve as the main staging area for the colonisation part of the project. The largest cargo vessels, their primary mission completed, are stripped and their space frames used to construct the Callisto orbital fuel depot and Port Valhalla. The initial colonists are mostly made up of construction workers, scientific personnel and mining crews.

In the same year, survey teams establish outposts on the 3 other Galilean moons: Europa, Ganymede and Io.

June 22, 2118:

The Pierce-Taylor expedition arrives on Europa aboard the spaceship "Westward." Dr. Henry Pierce, a well-known expert Xeno-archaeologist and arctic explorer, went mad on one of his expeditions and eventually became a mythos servant. All that is generally known of that ill fated expedition is that all but Dr. Pierce died and he was found alone in the drifting "Westward." After "recovering" from his madness, Dr. Pierce was drawn into the mythos and became a loyal priest of its gods. In reward for his service, he was gifted with several items that would allow him to find a long lost temple of Ithaqua in the Antarctic. Dr. John Taylor was also a noted arctic explorer. Like Pierce, he had experienced the mythos, but unlike Pierce he remained on the side of sanity.

June 23-July 7, 2118:

The expedition searches the wastes of Europa, directed by Pierce's map and enchanted compass. Despite the magical aids, the expedition makes but slow progress. Over the course of the search, four expedition members are lost, reportedly to landslides. In actuality, the hapless victims were sacrificed to supply the blood required by Pierce's compass.

July 8, 2118:

Dr. Pierce locates the temple and sets his men to the task of blasting away the encasing ice.

July 13, 2118:

The work crews reach the temple and are able to excavate the opening. Pierce enters the temple and begins to decipher the writings within.

July 14-July 20, 2118:

Pierce continues to decipher the writings and learns that they continue a ritual that will transform a human into a supernatural servant of Ithaqua. He begins preparing to work the ritual on himself, while carefully concealing what he has learned from Taylor.

July 21, 2118:

Pierce sends Taylor and some of the men back to the “Westward” to get supplies. Taylor is suspicious and leaves behind some men loyal to him.

July 22, 2118:

Aided by cultists who accompanied him, Pierce overpowers the non-cultists among the expedition and begins sacrificing them in his ritual. One non-cultist momentarily escapes and alerts Taylor with a flare.

July 23, 2118:

Taylor and his well-armed compatriots return and do battle with Pierce and his cultists. In the ensuing melee, all of the cultists perish, as well as several of Taylor's men. Pierce, having almost completed the ritual, is sealed within the temple by Taylor. Afraid to take further action, Taylor leaves Pierce trapped in the temple and returns Earth, never to return to Europa again.

2119:

The Pierce Research Outpost, named after the renowned explorer lost in the area last year, is established by the United Americas.

2120:

Colony bases are established on Europa and Ganymede.

Indigenous life is discovered in the subterranean seas of Europa. Mostly krill-like creatures and microbial life, it is nonetheless the first life discovered in the Sol system other than on Earth, and so Europa soon becomes centre of scientific study.

The first permanent mining base on Io is established. It is owned by Cheung Industries, the corporation that will eventually become the Cheung Corporation. Named Marduk, the base will eventually become the administrative centre on the moon.

2122:

The Pierce Research Outpost is closed down as part of Maunder Minor struck. The money originally allocated for the base is used to fund a study of welfare money usage in California, Earth.

2127:

A recruitment drive on Earth to find colonists for the fledgling Jovian colonies receives an unexpectedly overwhelming response. The resultant social upheaval from Maunder Minor has forced many people into such poverty that leaving Earth to start new lives as offworld colonist- workers is a very attractive proposition.

The sudden influx into Circum-Jove of migrant workers from the poorer countries on Earth causes simmering resentment among the earlier colonists. Historians have since recorded that many of these new colonists had already applied and been refused colonist status for Mars or Alpha Centauri. It seems with hindsight that the government felt that the dangerous environments of Circum-Jove were much better suited to colonists drawn from the poorer nation states of Earth.

Construction work is started on Sarpedon, the first of the Hanging Cities of Europa.

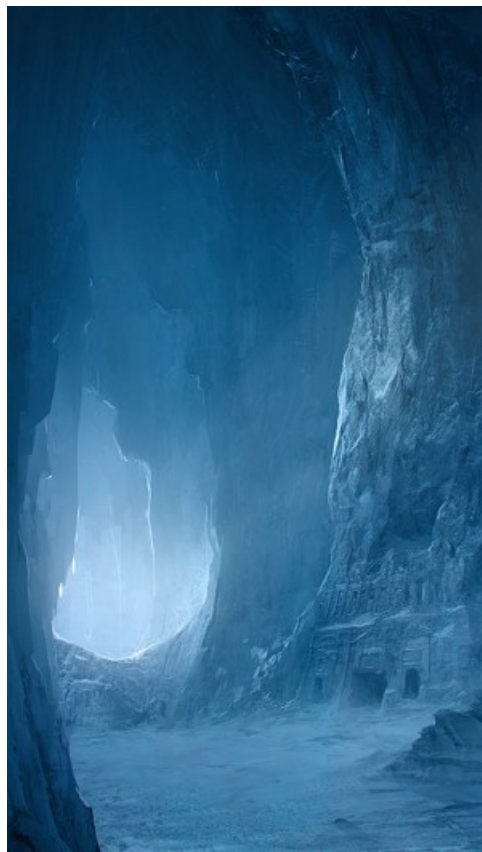
2131:

The Pierce Research Outpost is reopened to the UEF, after being abandoned for nearly a decade, to study the effect of Jupiter's intense radiation belt on Europa.

2139:

The Europa Incident. Much like the Roswell incident of the mid-20th century the Europa incident has been the source of much speculation and conspiracy theories. It has also generated a remarkable amount of media material in the form of documentaries, literature and movies.

Miners are rumoured to have witnessed a craft of strange organic design smashing its way out of the icy surface of the moon. Also heavy seismic activity tore through the surface of the moon, and destroyed the nearby mining colony of Gower 2, killing four citizens.



2140:

A UEAF military contingent is added to the Pierce Research Outpost and it is equipped with special communication equipment used to coordinate military activity in the region.

2144:

There is public outcry on Earth when an independent news story reveals that some enterprising colonists on Europa have begun to farm and eat the local marine life. What is worse is that the megacorporations and local authorities seem to be accepting the practice.

Despite political posturing by the government, and widespread condemnation from various environmental groups back on Earth and Mars, the fact remains that local food sources are cheaper and more reliable than shipping it in from the inner planets. Edible if rather flavourless, Teemers become a popular dish among the poorer colonists on Europa.

2222:

With the Blackout and the collapse of all human governments, the Pierce Research Outpost becomes an independent command associated with the Circum-Jove Administration (CJA aka jovad).

April 24, 2271:

The plate tectonics activity cause shifts in the ice sheet as well as rising water levels in the region. This partially exposes the temple.

April 25, 2271:

Shifting ice cracks the temple open. Pierce, who has survived in a state of enchanted suspended animation, awakens when the imprisoning Elder Sign is destroyed by the shifting ice.

April 26, 2271:

A surveillance satellite detects the temple. A STV is dispatched from the base to investigate. The STV lands and the exploration team reports finding a structure.

April 27-28, 2271:

The exploration team examines the temple carefully. They find Pierce, but think him to be just a frozen corpse. Pierce magically feeds off the team members until he is strong enough to act.

April 29, 2271:

Pierce kills two of the team members and completes the ritual. Transformed into an even greater inhuman monstrosity, Pierce kills three more of the expedition. Two of them escape in the STV, only to be brought down by icy, magical winds created by Pierce.

April 30, 2271:

The adventure begins.

Europa

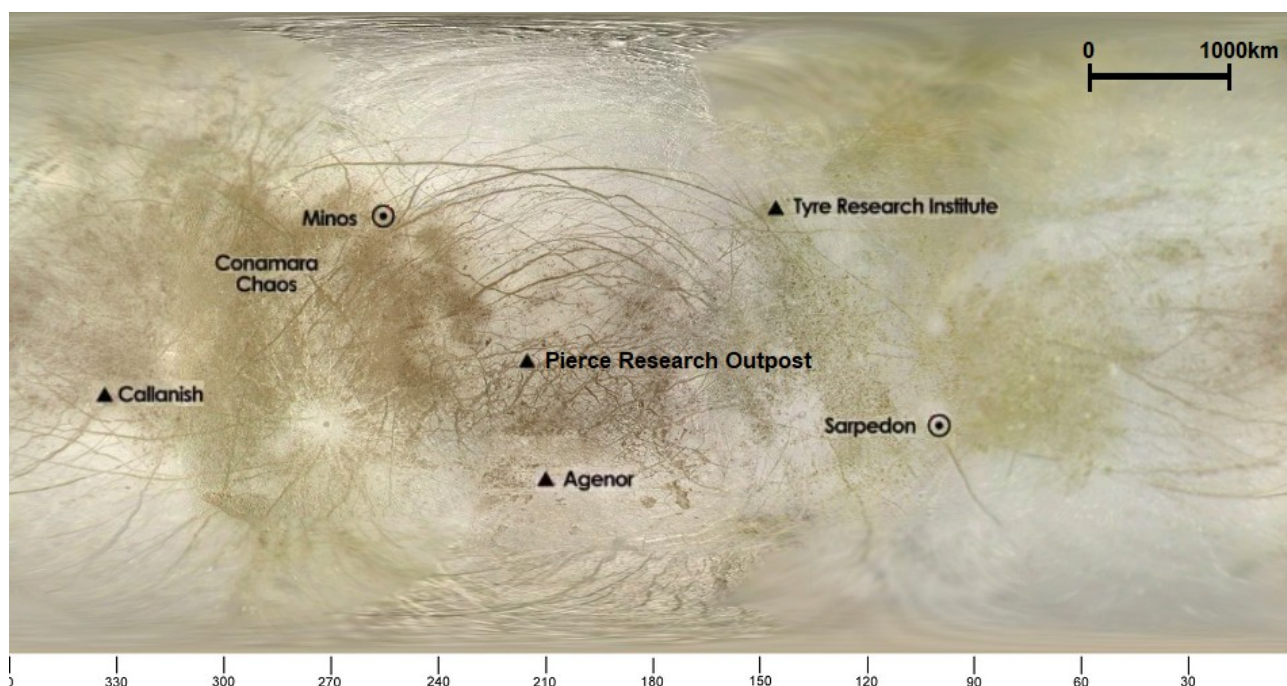
Like a giant vitrified eyeball in space, the eternally frozen moon Europa is the sixth of Jupiter's satellites and the fourth largest. It has a trace oxygen atmosphere, little more than vacuum. Unlike the oxygen in Earth's atmosphere, Europa's is not of biological origin. It is generated by sunlight and charged particles hitting Europa's icy surface producing water vapour which is subsequently split into hydrogen and oxygen.

Europa's surface is almost completely flat and covered in ice. Few topographical features are more than a few hundred metres high, and the majority of the surface consists of smooth, undulating ice plains. Europa's most striking surface feature are the ice fractures – huge ice chasms some over 20 km across that are the result in large part by the tidal stresses exerted by Jupiter, which produce volcanic water eruptions and geysers from beneath the frozen surface. From orbit they resemble a series of dark rust-coloured streaks criss-crossing the entire globe.

The radiation level at the surface of Europa is equivalent to a dose of about 540 rem per day, an amount of radiation that would cause severe illness or death in human beings exposed for a single Earth-day. The duration of a European day is approximately 3.5 times that of a day on Earth, resulting in 3.5 times bigger radiation exposure.

The only man-made surface structures on Europa, apart from scientific outposts and mining survey bases, are the surface access points to the subterranean colony and the associated spacecraft landing zones.





Europa has the largest population of all the Galilean moons, and is a centre for cutting edge biotech research and development – scientists from Europa have gained the nickname ‘gene-genies’ for their advances they have made in the field of genetic engineering. Today the moon supports a population of 1.4 million, most of who live in hanging cities at the top of the world-ocean, where oceanic hotspots have eroded the crustal ice to a mere kilometre thick. Minos and Sarpedon, the ‘Hanging Cities of Europa’ have become popular tourist destinations for visitors from the inner planets.

A large percentage of the population of Europa are descended from the families of the original migrant workers who came to the Jovian colonies looking for a new life in the wake of ‘Maunder Minor’ in the mid-22nd Century.

The Briefing

Prior to the start of actual play, the players need to be given a general briefing on their situation. The following information should be presented to the players, prior to the actual start of play.

Expedition Timeline

This information is located in an old text document written by Taylor. The file was downloaded to the base when the base was open and named after Pierce. The document is fairly well written and has been read (more out of boredom) by almost everyone at the base. The following information covers the high points of the document. Of course, most of it is pure fiction.

June 22, 2118:

The Pierce-Taylor expedition arrives on Europa aboard the spaceship “Westward.” This expedition was led by Dr. Henry Pierce, a well known expert Xeno-archaeologist and arctic explorer, and was his first outing after an ill-fated expedition. On that expedition, all but Dr. Pierce died and he was found alone in the drifting “Westward.” His partner, Dr. John Taylor, was also a noted arctic explorer.

June 23-July 7, 2118:

The expedition explores the wastes of Europa. Over the course of the exploration, four expedition members are lost to landslides.

July 21, 2118:

Taylor leads several men back to the “Westward” to get supplies.

July 23, 2118:

Taylor and his men return and find that Pierce and the others have perished in a devastating radiation storm.

The text concludes with a somewhat odd passage: *“It is well that men heed the fate of brave Pierce. There are some places where man should tread carefully or perhaps not at all. Pierce’s place of rest, the vast icy realm of Europa, is one such place. May his body rest eternally in peace.”*

Players' Timeline

2119:

The Pierce Research Outpost, named after the renowned explorer lost in the area last year, is established by the United Americas.

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2222:

With the Blackout and the collapse of all human governments, the Pierce Research Outpost becomes an independent command associated with the Circum-Jove Administration (CJA aka jovad).

April 26, 2271:

Storms on Jupiter (for unknown reasons) which have been causing shifting in Europa’s ice sheet as well as a rising water levels in the region, partially exposes a large object in the ice, which is spotted by a surveillance satellite. A STV is dispatched from the base to investigate. The STV lands and the exploration team reports finding a structure, apparently of extreme age.

April 27-28, 2056:

The exploration team examines the structure carefully. They first report finding an incredibly well preserved body, which they suspect is Pierce, many human skulls and bones, as well as a frozen pressurized tent. Later, they report finding a sturdy iron box frozen in the ice. They report finding an odd, star-shaped stone in it as well as some damaged papers and an etched piece of metal. The expedition members report feeling vaguely ill and there is concern they may have been exposed to a long-dormant virus or bacteria.

April 29, 2056:

At 11:45 pm a storm appears out of nowhere, cutting visibility to zero. A transmission from the expedition is received at 11:55 pm: “Something has gone wrong... we’re getting the hell out of here!” A second transmission is received, from the expedition STV, at 11:57 pm: “It’s after us... God... no feet... flying... help!” No further transmissions are received.

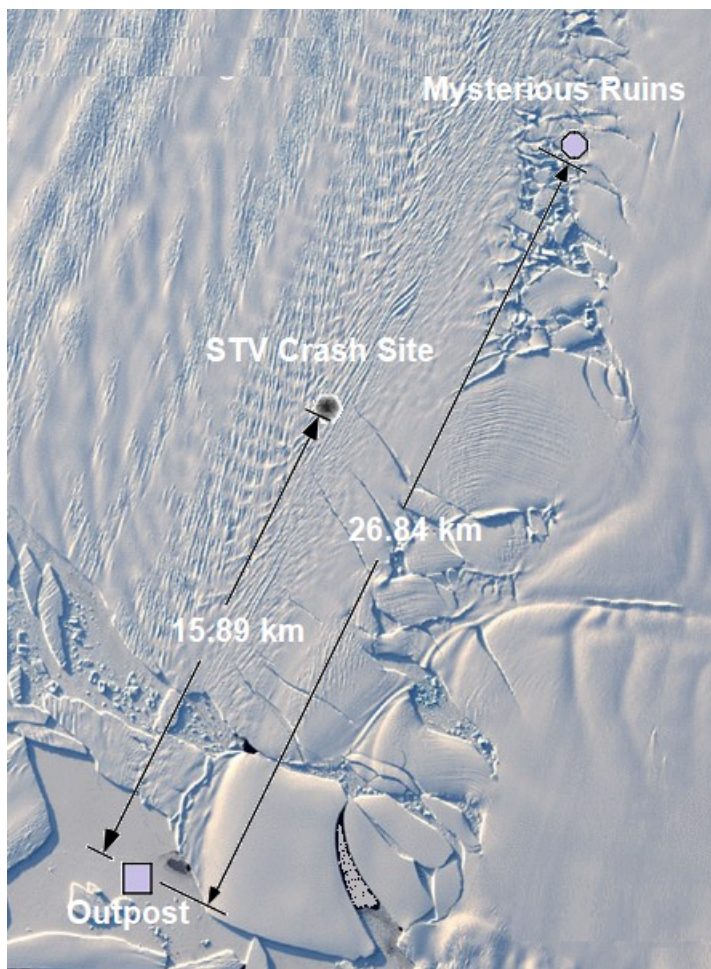
April 30, 2056:

The adventure begins.



The Crash Site

The main map details the area around the Pierce Research Outpost.



Research Outpost:

This is the Pierce Research Outpost. It is detailed in its own section.

STV Crash Site:

This is where one of the base STVs was brought down by a servant of Ithaqua, the Wind Walker. The crash site is detailed below.

The blueprint of the STV is given at the end of the scenario.

Mysterious Ruins:

This is where a temple to Ithaqua has been exposed by an ice slide.

Pierce Research Outpost

The Pierce Research Outpost is a highly advanced scientific outpost dedicated to studying Europa. It is manned by a twenty person international team of scientists and support personnel. It began its career as a United Americas research station and was later turned over to UEF usage in 2131. The base is constructed out of extremely strong but very light material and the whole thing can be disassembled for STV transport.

Barracks:

The barracks contains the living quarters for the personnel. To minimize stress, each crew member shares a room with another crew member who is on the opposite shift. The barracks is equipped with the latest in entertainment and exercise equipment as well as comfortable facilities. In addition to the quarters, the barracks contains kitchen facilities and the mess.

Main Building:

The main building houses the scientific labs, meeting rooms, computer rooms, and the radio shack for the base. This is where the on-duty crew works. The equipment is all state of the art and cutting edge research in a variety of areas (such as plate tectonics history) is done here.

Ground Vehicle Storage:

The base's four ATV and one Snow Tractor are stored here. The ATV are quite large and are capable of holding three adults and a fair amount of equipment. The Snow Tractor can hold up to three adults in its heated cab. The Snow Tractor is used mostly to plow ice.

STV Pad:

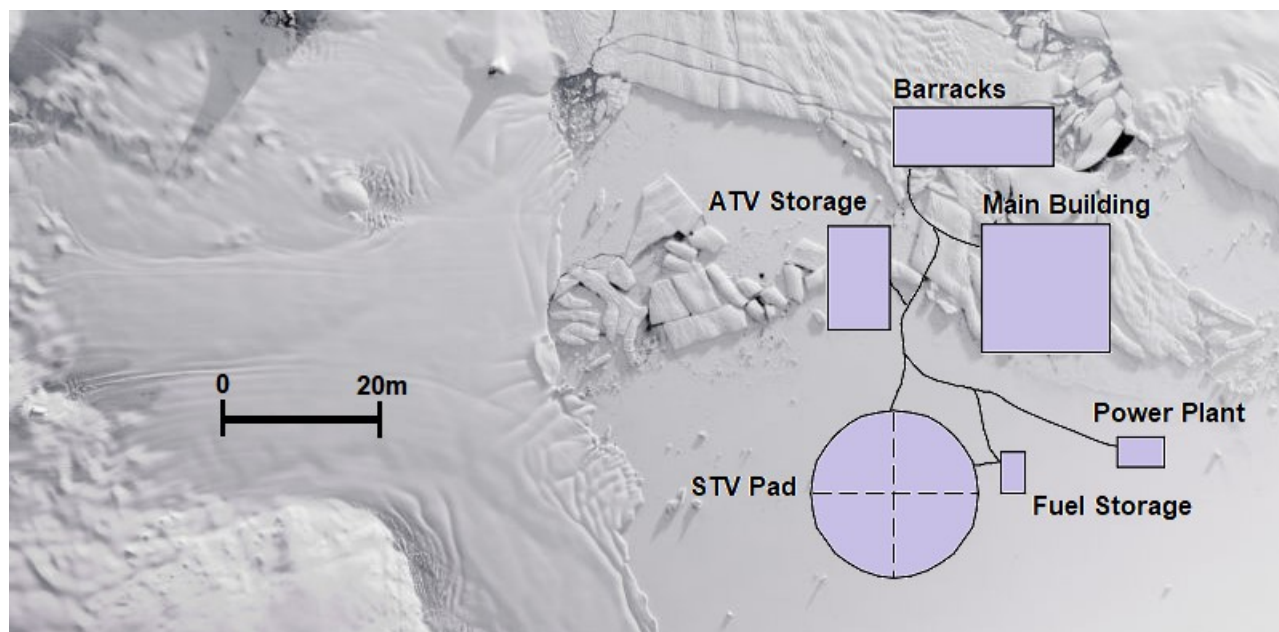
The pad is a heavy concrete platform set on the ice. It has protected lights set into it as well as a radio transponder to aid in landings. The base is equipped with two Boeing Arctic Hawk STVs.

Fuel Storage:

Fuel for the vehicles and power plant are kept here in self sealing containers. The building is equipped with automated fire extinguishers to avoid accidents.

Power Plant:

This building contains the base's power plant. It is a technologically advanced generator which produces a large amount of electricity from a moderate amount of fuel. Each building also has a small back up generator and a 240 hour fuel supply.



The adventure begins

The following provides the Game Master with a guide as to how to unfold the events of the adventure.

The Howl of the Sirens, the Roar of the Wind

The adventure begins for the adventurers with the howl of the emergency sirens at 12:01 AM, April 29 (EST). Right after the siren dies down, the adventurers will be called to the command center in the main building. Once they reach the command center, the tired and worried-looking base commander will inform them of the events since 11:45 and say that she suspects the expedition STV has crashed while attempting to return to the base, probably due to the weather conditions. The commander will also add that she is worried that the pilot may have been psychologically disturbed, since his last transmission was extremely odd. This would help to explain why he chose to fly the STV under such dangerous conditions. After informing the adventurers of the situation, the base commander will ask them to take a STV and search for the missing STV and investigate the expedition site. Of course, the base commander will not allow the adventurers to leave until the storm dies down. The storm will dissipate as rapidly as it appeared, allowing the adventurers to depart at 12:15 am, after the STV has been made ready.

The action begins for the adventurers when they are sent out to investigate the STV crash site. After they visit the crash site, they will then proceed to the temple site and their fate.

Defrosting the STV

Because of the harsh Arctic conditions the STV is typically coated with ice very quickly after landing. In order to get the STV ready to fly, the adventurers will have to spend some time getting the ice off it. The standard method employed is to use some old sunlamps that are stored in the base to speed up the process. These rather harsh lamps generate enough

heat to melt the ice off the STV. Although the designer would probably not be pleased with this method of flight prep, the STV's advanced construction makes it able to withstand the stresses of freezes and thaws. Once airborne and powered up, the heating elements incorporated into the STV are adequate to keep the ice formation down to a minimum.

STV Crash Site

The search for the crash site will be uneventful. The adventurers will soon locate the missing STV which is on the ice, partially buried. The adventurers will notice that the STV has suffered little damage, although it is lying on its side. All of the STV's doors are open, but no bodies are visible from the air (either in the STV or on the ice).

If the adventurers set down their STV and go to investigate the downed STV, they will be able to clearly see that the landing was not too bad and that the crew should have survived. If they approach the STV, they will spot an automatic pistol lying in the snow. Four shots have been fired. Around the STV are thick drifts of snow, which could easily conceal something as large as a human. If the players decide to inspect the STV, they will find it abandoned, with snow already beginning to collect through the open doors.

Two expedition members are nearby. Both have been slain by Pierce and resurrected as drone servants of Ithaqua, and both will attack the adventurers when they begin to search around. First to be found will be Lieutenant Daniel Jones, who is lying in the snow behind a drift. Jones will initially appear to be a corpse, his clothes torn open and stained with blood. Within moments of discovery, however, he will begin to moan and twitch; the adventurers are likely to think he is regaining consciousness, which is somewhat correct. Jones will stagger to his feet and then will lurch at the neck of the nearest person. He'll attempt to tear off their hood, goggles, etc. while trying to get his teeth into their flesh.

As soon as "Jones" attacks, the undead scientist Rachel Tsung will rise out of the snow to attack as well. While the battle with the ice zombies will not be very pleasant for the adventurers (after all, they will be forced to mangle the corpses of their friends), the stumbling corpses should not pose a serious threat and the adventurers should be able to journey on to the expedition site.

If the adventurers report in to the base, the commander will not accept any explanation that involves zombies. The commander will suggest that 1) the expedition members went mad or 2) that they were exposed to some sort of natural or artificial biological agent (remember, they reported feeling ill after entering the structure) which brought about their current condition. After any wounds are treated by the good doctor, the adventurers will be asked to continue on to the expedition site to search for any survivors there.

While the adventurers are dealing with the ice zombies, Pierce is searching the area for signs of other humans. While he is insane and wants to sacrifice all the humans in the UEF research base to Ithaqua, Pierce wants to be sure that there are no other humans nearby that can come to their aid (Pierce is, after all, terribly afraid of death and wants to take no chances). Once he is confident that there is no help for the humans of the base, he will gather aid (several Gnoph-Keh) and return to attack the UEF outpost. This process will, however, take him a few hours.

When the adventurers arrive at the expedition site, they will see a circular structure (with a broken section – it looks like something took a bite out of it) and the expedition tent nearby. If the adventurers check the area, they will see little from the air.

Pressurized Tent:

The tent is the expedition's tent. It is a fairly large pressurized tent and is made of special material and equipped with a small generator. The interior looks as if the expedition suddenly abandoned it in a great hurry. One side of the tent is torn open roughly. There is a small amount of blood on the ice near the opening. If the adventurers check the tent, they will find that it contains the usual arctic gear as well as two notebook computers. All of the contents of the tent are quite cold and dusted with snow. Fortunately, the computers are specially designed for arctic use and will operate properly in the cold. One belonged to Rachel Tsung, the other to Dr. Charles Daniels. Tsung, the expedition's biologist, has extensive notes on the organic material found within and on the structure. Most of her notes are mundane, except for two entries. In one she described the remarkable preservation of the body of Pierce and reports her findings from the sample taken from Pierce, namely that Pierce's cells are still alive, although his metabolic processes have slowed incredibly. The second entry reports that Pierce's body is host to an unknown form of microorganism. Tsung reports that she is completely baffled by the organism, which seems to be incredibly resistant to her attempts to destroy samples. She also reports that it grows



extremely rapidly when exposed to UV radiation, with larger colonies of the organism consuming smaller ones when no other nutrients are available.

Dr. Daniels' speciality was Xeno-archaeology (no one at the base, including him, was sure why he was assigned there – the reason was that a few well-placed military officials had reason to suspect the presence of pre-human structures on Europa) and his notes are primarily on the temple. He describes it as being of no known human building style and as being composed of “unknown material.” His notes on the altar state that the designs and inscriptions on it are similar to those found in sites in Alaska. He has several references in his notes to the “Walker of the Wastes,” which is one of the titles humans have given Ithaqua. According to the notes, this “Walker of the Wastes” is described as a giant monster of the ice which “travels all the realms to sate its eternal hunger.”

Aside from the two computers, there is nothing else interesting in the tent.

The Temple of Ithaqua

The temple building was originally a storage container used by Elder Things around 250 Million BC (just prior to the revolt of the Shoggoths). The container was no ordinary one for it was used to hold material for the creation of the dread Shoggoths. While the fate of the rest of the Elder Thing structure remains a mystery, the container eventually ended up on Europa where it was found by a pre-human race which worshipped Ithaqua. This race converted the container into a temple (they took it to be a gift from Ithaqua) and set about their vile practices with a renewed frenzy. Unfortunately for this vile race, the container still held some shoggoth material which soon infested and devoured the bodies of the faithful of Ithaqua. The temple lay abandoned for untold years until Dr. Pierce, after learning of it in dark and secret books, set out to find it.

The temple structure is clearly of alien manufacture. While the structure is not offensive to the human eye, there is something vaguely off about it, something that indicates (on a subconscious level) that this is not a work of man. One side of the temple structure is open (where the entrance used to be) as it was broken off by shifting ice.

The Shoggoth Zombie

If the players look inside the temple, they will see the altar as well as the body of Dr. Daniels. Daniels' body is a horrid sight: the flesh seems to be melting off from it and forming a puddle on the floor. Mixing with the slowly forming puddle of flesh are small, grayish clumps with eye-like markings (shoggoth-matter). Nearby lies the mauled body of the other member of the expedition, Sergeant Mjanwi. If the adventurers enter the temple, the flesh from Daniels' body will ooze back up onto his skeleton, guided by the shoggoth matter. The horrible mass will then arise and lurch towards the adventurers.

Daniels' body has almost been completely absorbed and converted to a form of shoggoth matter.

The resulting being is twisted and weaker version of a shoggoth, but it is still dangerous. It is driven by a primal desire to incorporate more and more flesh into itself, so it can achieve true shoggoth size.



Temple Interior

The interior has an odd smell to it (a mix of fresh blood, old bones, shoggoth-matter, and other stuff) which humans will find disagreeable. The interior contains the bodies of the two expedition members. They were drained of power by Pierce and then killed as sacrifices to Ithaqua to complete the ritual of transformation. An examination of the bodies by someone with medical skill will reveal that they were killed by a knife (a survival knife from the expedition supplies, which is resting on the altar) and not by the Daniels-creature. A knocked-over table is on the floor and scattered about it are various instruments and notes. An examination of the material will reveal the same information as the computers, but there are actual samples present.

If the adventurers examine the samples and the examiner makes a medical skill roll, they will learn that the samples are of what appears to be human tissue infested by some very odd, unknown organisms.

If the adventurers expose them to UV light, they will expand dramatically and consume their host tissue. If the adventurers are foolish enough to let any of the material come in contact with their skin, the shoggoth-material will enter their bodies and begin feeding. The results of such an unpleasant occurrence are up to the Game Master; have fun with it and make it very unpleasant.

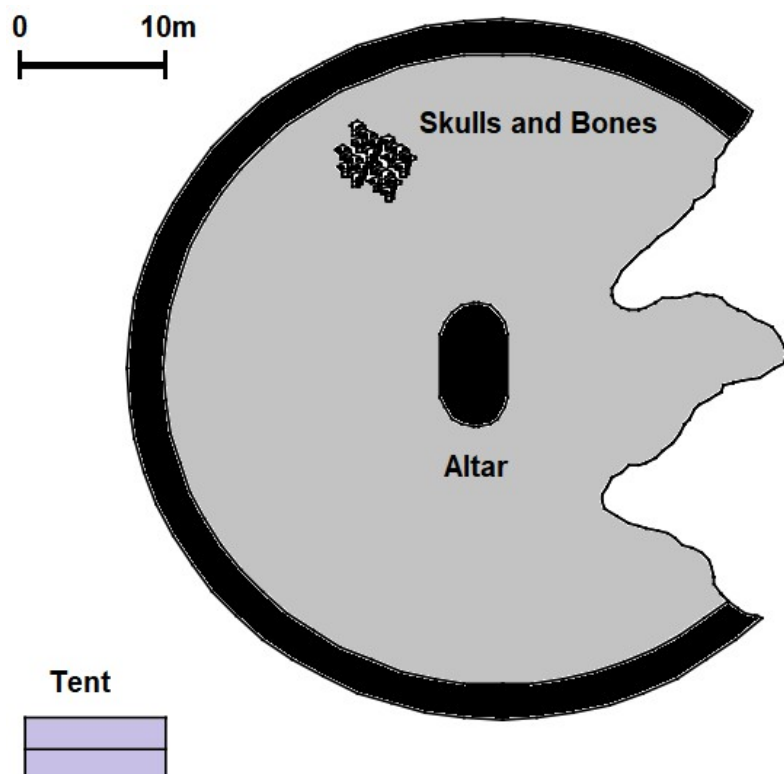
Skulls and Bones:

This is a pile of skulls and bones which has collected due to the slight tilt of the temple. If some one with biology or medical skill examines the bones and makes a skill roll, they will be able to determine that not all the bones are human.

The human ones are, of course, those from the Pierce-Taylor expedition while the non-human ones are from the pre-human race that worshiped Ithaqua.

Altar:

The ice-block altar is coated in frozen blood, has a survival knife on it as well as two odd protrusions. These protrusions are all that are left of a crude stone statue of Ithaqua. The side of the altar is covered with strange designs and script. The script, which is in an ancient, non-human language, contains the text of the spells Contact Gnoph-Keh, Call/Dismiss Ithaqua, and Ritual of Transformation.



Frozen Wings

While the adventurers are examining the temple, Pierce will return to the area and notice their presence. He will initially want to simply slay them outright, but when he sees Dr. Taylor he will change his mind. Pierce will be convinced that Dr. Taylor is actually John Taylor and Pierce will want to make him suffer before he sacrifices him to Ithaqua. This will give the adventurers time. Being in a particularly sadistic mood, he will have his Gnoph-Keh allies create a micro-blizzard over the adventurers STV to render it incapable of flying. The Gnoph-Keh and Pierce will stay out of sight, so the adventurers will only hear a horrible roaring noise coming from outside and see their STV enveloped in a rapidly diminishing swirl of ice and snow. If the adventurers left one of their number behind, they will be frozen to death in the STV, unless they leave as soon as the attack begins. Once they see the condition of their STV, the adventurers will realize that they have to trek across 26.84 km of frozen waste to reach their base.

Journey Across the Ice

Since the adventurers are experienced in the arctic and well equipped, they will be able to cover the distance in about seven hours. The adventurers have no chance of getting lost as they have a satellite navigation uplink. However, they have no way of communicating with the base since radio communications will be filled with static (due to an air current laden with radiation which is passing through the region).

Since Pierce wants to torment the adventurers, they will not be in actual danger as they travel back to the research base. However, the adventurers will not know this and their journey will be horrifying. As they trek back across the ice, the Gnoph-Keh will create small blizzards to bedevil the adventurers, perhaps even causing them some damage. The Gnoph-Keh will also allow themselves to be briefly spotted by the adventurers. In addition, Pierce will play tricks on the adventurers. For example, he might re-animate one of the dead expedition members and drop him off in the adventurers' path. The keeper should be sure to instill the proper level of fear in the players.

At some point while the adventurers are making their trek, Pierce and his allies will stop harassing the adventurers. The reason for this is that Pierce has finally gathered enough allies to attack the base, which he will do. His attack will be brutal and devastating. While the personnel will kill several of Pierce's allies, they will eventually freeze the base and kill everyone in it.

Homecoming

As the adventurers approach the research base, they will see the interior lights shining and everything apparently normal. Once they get closer, they will see signs of a struggle: bullet holes in some of the walls, broken windows, and blood on the ice. The interior of the base is a mess. Everything has been torn up and there are frozen bodies with horrible wounds and terrifying expressions scattered about within the buildings.

After the adventurers realize the full horror of their situation, they will hear the wind die down and a booming voice will be heard:

"Welcome home Taylor. Do you like what I've done to the place? You probably never expected to see me again, when you sealed me in the temple, but you never were very bright. I was awake all those years, Taylor. I spent them thinking of what I would do to you when my great intellect and ability led to my freedom. I think this is suitable revenge, don't you Taylor? After I kill your friends and re-animate them to keep you company, I'll leave you here. I'll leave you here forever."

After giving his speech, Pierce will set about making good on his threat.

Fighting Pierce

Pierce's great ego is forcing him to attack the adventurers without help. While he wants to live forever, he is utterly confident that four humans cannot possibly do him harm. However, he does know about firearms and will be subtle and cautious in his attack. This will give the players some time to plan and effect their defense.

Pierce can be defeated in two main ways. The first is an out-and-out battle. If the players choose this option, Pierce will probably slaughter them. The second option is to make use of the adventurers' talents and assets. Because of his nature, Pierce is vulnerable to Elder Signs. Taylor can construct one, using the spell passed down through his family. Once one is constructed, the adventurers will have to set a suitable trap for Pierce. If the players checked the computers, they will know that Pierce is infested with Shoggoth material and that this material grows rapidly in UV light. The adventurers will know that the base has a stock of old sun lamps (which are used to melt ice off the vehicles since they emit harsh UV radiation). The adventurers can set these lamps up in a suitable place and power them off one of the buildings' power supplies. The big problem will be forcing or luring Pierce into the trap. This can be done in a variety of ways. The two main ways are 1) to force him into the area using an Elder Sign or 2) to lure him into an area by having Taylor taunt him. Because of Pierce's ego, he will be easily provoked by Taylor and will pursue him.

If Pierce is exposed to the lamps, the Shoggoth-material in his body will begin to grow and consume his flesh. He will take no damage the first round, one point the next round, two the second, and so on until the fifth round. After five rounds of exposure to the UV light, the growth cycle of the shoggoth-material will be fully activated and it will continue until Pierce is consumed. After that, he will take 1D6 HP a round as the rapidly-growing shoggoth material rips its way through his body. Seeing this process costs the viewer 1/1D8 Sanity points. Once Pierce starts taking 1D6 damage, he will flee the building, howling. He will rush out into the arctic to summon Ithaqua, in the hopes that his god will be able to save him.

As Pierce dies, his life energy goes into his summoning spell and Ithaqua will be brought to Earth just as Pierce's body is reduced to a writhing, twisting mass of mindless shoggoth matter. If Pierce is killed physically (using guns or whatever) by the adventurers, Ithaqua will show up shortly after Pierce's death.

If Pierce kills the adventurers, he will re-animate them as Ice Zombies and leave them and the still-living Taylor in the base. He will then summon Ithaqua to transform Taylor (after Pierce bites off his feet, of course) and Taylor will be left a mad cannibalistic monster, gnawing on the bones of his dead friends.

The End

Assuming the adventurers have dealt with Pierce, they will be trapped on Europa in a base which will be frozen over as soon as the auxiliary generators run out of fuel (Pierce destroyed the main generator and punctured the fuel tanks). Of course, the arrival of Ithaqua will keep the shortage of fuel from being a problem.

The adventure probably ends with the surviving adventurers trying to call for help on the base's laser communication system. After checking through several dead channels, the adventurers will get in touch with the surviving space station orbiting Europa. The communications officer will ask the adventurers to give a report of their situation and then he will

say “I won’t lie to you. We’ve lost communication with just about everything on Earth. You’re the first contact we’ve had in days. God, I wish we could help you.”

Adventurers who flee into the night are pursued and taken in the clutches of Ithaqua. Those who stay in the base are met with incredible winds that tear down walls and ceilings. The last message from the adventurers to the space station, the last message anyone on Earth is able to send, tells of “dark and horrible shapes moving across the ice” behind which moves “something large... something inhumanly large...”

Scenario Equipment

Steyr Advanced Combat Rifle

This bullpup configured weapon is the latest member of the famous Steyr line of assault rifles. It is made of the latest lightweight polymers and fires the latest in caseless ammunition. The version used by Arctic forces is specially designed to be capable of firing in almost any conditions, even if the rifle has just been chipped out of a block of ice.



ROF:	3
Fire Mode:	SA/A (Burst 3/5/10)
Damage:	2d8+3
Penetration Value:	+0
Maximum Range:	1100m
Weight Unloaded:	3.9kg
Ammo:	30 round magazine (0.5kg)
Fail:	99

Arctic Gear

Arctic gear consists of a full body suit of heat retaining material. The body suit is equipped with a battery powered heating system that is good for twenty four hours of use. Along with the suit comes a helmet equipped with a two-way radio and polarized lenses. Stored in various convenient pockets are survival items such as medical supplies, a knife, flares, and other equipment. Arctic gear with a functioning heating system counts as four points of armor against cold attacks and two points against such attacks when the batteries are exhausted.

Military Binoculars

Military binoculars are highly advanced optical binoculars which are also equipped with a thermal and light enhancement viewing systems. They are also equipped with microcomputers that can calculate ranges and enhance images. Such binoculars are extremely useful in the arctic as they can be used to detect heat sources (such as vehicles, bases, and people) even through snowstorms.

Dramatis Personae

There are two main human NPCs that the players will interact with during the course of the adventure. Two of these NPCs are the UEF research outpost commander and the communications officer. Since these two NPCs will not be actively involved in the adventure, no stats are provided for them.

Base Commander Jody Roy

Commander Roy is the base commander and is a native of Canada, Earth. She is an extremely tough minded individual and is well-liked by those under her command as well as the scientists. Roy the highest authority in the region and hence fully responsible for the research base and its personnel. Any reports of monsters or other oddness will be regarded by her as signs that the individual making such a report is cracking up under the stress of the situation.

Communication Officer “Al” Hussein

Hussein, who hails from Damascus, is the base’s communication officer. He is responsible for all aspects of communications, including the coded and secure military channels. During his communications, his voice will be crisp and professional and he will maintain constant communications with the adventurers (almost to the point of becoming slightly annoying).

Shoggoth “zombie”

STR 13; CON 17; INT 04; SIZ 12; POW 12; DEX 04; HF 1/1D8

Move 4; db: none

Hit Points: 29

Armor:

None, but

1. fire and electrical attacks do only three quarters damage
2. physical weapons such as firearms do only quarter damage
3. it regenerates 1 hit point per round

Weapons:

Claw 35%, damage 1D6+db.

Dr. Henry Pierce

Servant of Ithaqua

STR 26; CON 30; SIZ 26; INT 18; POW 19; DEX 14; HF 1/1D10 to see Pierce in his new form.

Move: 8/ 60 Flying; db: +2D6

Hit Points: 56

Armor:

4 points of skin.

Weapons:

- Wind Gust 50%, damage lift and drop: 1D6 x 3 meters, each 3 meters dropped equals 1D6 damage.
- Claw: 40%, Damage 2D6+db (normal armor and “cold” armor, such as arctic gear, counts against this attack).

Attacks:

If Dr. Pierce is within six meters, he can use powerful winds to whisk victims up into the air and drop them onto the ice. Players of those attacked must roll on the Resistance Table, matching the investigator’s STR against Pierce’s STR on that table. If Pierce is attacking several people, he must divide his strength among them. Pierce can also use his winds to interfere with flying vehicles, especially STVs. Used in this manner, the pilot must roll a successful piloting skill. This skill is modified by subtracting Pierce’s STR from the pilots skill. On a missed roll, Pierce can force the craft 3D6 meters in any general direction he chooses. If the pilot succeeds, she retains control of the craft.

Spells:

Call The Wind-Walker/7 70%, Call Spawn of the Winds/4 80%, Create Ice Zombie/1 90%, Dread Curse Of Azathoth/5 80%, Ritual Of Transformation/10 70%, The Black Words/6+ 85%.

Physical description:

Pierce is a horrid monstrosity. He appears to be an unholy mix of his original, human form and Ithaqua. Despite his horrid alteration, many of Pierce’s features are still recognizable (which makes his appearance even more horrible).

Profile:

Once human, Pierce is a vicious and insane monster. After successfully completing the ritual, he was transformed into a servant of Ithaqua. Now he exists to further madness, death, and the spread of icy cold.

Despite his complete insanity, Pierce still has a brilliant mind and he retains most of his memories and knowledge. His main vulnerabilities are his ego and his desire to live forever. He can be driven into rages by insults and provocations and during such rages he will often make mistakes that can be exploited. His desire to live forever, which helped lead him to his current fate, makes him overly cautious and somewhat cowardly (at least when he is not in a rage).

Pierce's Spells:

- CALL THE WIND-WALKER/7: As per the rulebook.
- CALL SPAWN OF THE WINDS/4: Because of Pierce's nature and power, he is able to call several Spawns and have them respond quickly. While the Spawns are not his slaves, they are his allies and will aid him in the course of his activities.
- CREATE ICE ZOMBIE/1: Casting this spell requires a human body which was either killed by cold (or by a being of the cold such as Ithaqua, a Servant of Itahqua, or a Spawn of the Winds) or a corpse that has been allowed to freeze all the way through. This body must be coated in snow or ice and then the spell must be cast. Casting the spell requires a permanent point of POW from the caster, and 1D6 Sanity Points. Casting the spell requires a number of minutes equal to its cost in magic points. At the end of the spell, the newly formed zombie (which looks like a frozen corpse) stands up to do its master's bidding.
- DREAD CURSE OF AZATHOTH/5: As per the rule book.
- RITUAL OF TRANSFORMATION/10: This extremely rare spell enables a human being to transform himself into a monstrous Servant of Ithaqua. Casting this spell requires three days (which need not be consecutive). On each day of casting, at least two humans (or human like beings) must be sacrificed and the caster must expend one permanent point of POW. The caster (if not already insane) loses 1D8 points of Sanity per casting. After the third casting, the caster is transformed into a hideous monstrosity. The caster's STR, CON and SIZ all double, while all other attributes (except APP) remain the same. The caster's SAN drops to 0, if it is not there already. The transformed person has the attack abilities and inflicts the Sanity loss as described above in Pierce's statistics.
- THE BLACK WORDS/6+: As per the rulebook.

Ice Zombies

Ice Zombies are rather horrible in appearance as they look like frozen human corpses of people who have tied terrible, agonizing deaths and have been forced back into some unholy semblance of life. This is because this is exactly what they are. Because of their magically frozen state, they can move, but do so in a jerky fashion and all movement is accompanied by a horrid sound that reminds listeners of breaking bones.

Like their normal zombie "cousins," Ice Zombies are almost immune to impaling weapons (such as firearms), although such weapons will give them an even more horrifying appearance. Being dead, Ice Zombies cannot be killed but must instead be hacked apart or destroyed by some other means. They are particularly vulnerable to intense heat or large fires, taking double normal damage from such attacks. Ice Zombies also require freezing temperatures to remain active, otherwise they begin to thaw out. Once thawed, they cease to be animated. Ice Zombies, like normal zombies, require one point of power from their creator.



Characteristics		Average	
STR	3D6 x2	20-22	Move 3
CON	3D6 x2	20-22	Hit Points 30-32
SIZ	3D6	10	
INT	2D6+6	13	
POW	01	01	
DEX	1D6	03	
HF	1/1D8		

Damage Bonus: +1D4/+1D6

Armor:

- Frozen body acts as 2 points of armor.
- impaling weapons do 1 point of damage.
- all others do one half rolled damage.

Weapon	Attack	Damage
Bite	30%	1D3
Bludgeon (punch)	30%	1D6+db

The Former Lieutenant Daniel Jones

Ice Zombie

STR 26; CON 28; SIZ 13; INT 14; POW 01; DEX 03; HF 1/1D8

Move: 3; db: +1D6

Hit Points: 41

The Former Rachel Tsung

Ice Zombie

STR 20; CON 22; SIZ 07; INT 13; POW 01; DEX 05; HF 1/1D8

Move: 3; db: +1D4

Hit Points: 29

The Players

Four characters are provided which compose the investigation team. If there is only one player, that player should take Dr. Taylor as their character. If there are less than four players, the other team members will need to be run as NPCs, but Dr. Taylor should always be taken by a player. The adventurers may be altered at the Keeper's discretion, should the players desire to do so. Players may freely alter the sex of the characters they will be playing (prior to the start of the adventure, of course).

Captain Karl Harnst

35 year old, Clean cut Security Chief



STR: 13; CON: 15; SIZ: 13; INT: 14; POW: 15; DEX: 14; APP: 13; BRA: 17; SAN: 75

Hit Points: 28

Damage Bonus: +1D4

Skills: Climb 55%, Computer Use 15%, Dodge 45%, Electronics 15%, First Aid 45%, Listen 35%, Martial Arts 65%, Persuade 55%, Psychology 65%, Sneak 45%, Spot Hidden 65%, Track 45%
Handgun 75%, Rifle 65%

Languages: German 85%, English 75%

Physical Description: Harnst is a tall, healthy looking man with blonde hair and blue eyes. He has a large scar which runs from his left cheek all the way down to his chest (a hunting accident).

Profile: Harnst's entire adult life has been spent in the EuroCorps. After enlisting right after school, his abilities soon led him to officer candidate school and up through the ranks. In his younger days, Harnst was nearly a fascist, but his experiences while assigned to a UEAf peace keeping force in the Belt radically altered his views.

Harnst is a very practical and pragmatic man and considers the rational use of force to be an effective means of problem-solving. Hence, his approach to problems tends to be very direct. While Harnst is very intelligent, he has little in the way of fanciful imagination and dismisses all rumors about some supernatural basis to the worlds problems as complete nonsense.

Equipment: Arctic gear, automatic pistol and two clips, Steyr Advanced Combat Rifle and two clips, Military Binoculars.

Lieutenant Janet Armstrong

28 year old, tough and stunt STV pilot



STR: 11; CON: 14; SIZ: 08; INT: 15; POW: 13; DEX: 16; APP: 14; BRA: 16; SAN: 63

Hit Points: 22

Damage Bonus: none

Skills: Astronomy 35%, Computer Use 15%, Dodge 45%, Electrical Repair 35%, Electronics 10%, First Aid 40%, Hide 85%, Listen 55%, Locksmith 45%, Martial Arts 50%, Mechanical Repair 55%, Persuade 25%, Pilot Aircraft (STV) 90%, Knife 55%, Handgun 45%, Rifle 35%

Languages: English 80%

Physical Description: Armstrong is a dark skinned Australian woman with a slightly wild look in her eyes.

Profile: Armstrong has been flying STVs since she was a girl and did several stunt jobs in various films. When conditions worsened around the world, she volunteered for military service. After dumping an amorous general who tried to put a move on her into the ocean, she was transferred on Europa to Pierce Research Outpost.

Armstrong is very skilled and extremely reckless. She tends to live her life like she flies, which has gotten her in trouble on many occasions. Most of the base personnel think she is completely nuts, but there is no one they would rather have at the controls when things get difficult.

Equipment: Arctic gear, automatic pistol and two clips, combat knife.

Dr. David Taylor

43 year old, Scientist



STR: 11; CON: 14; SIZ: 12; INT: 19; POW: 16; DEX: 12; APP: 13; BRA: 14; SAN: 74

Hit Points: 26

Damage Bonus: None

Skills: Anthropology 35%, Archaeology 85%, Biology 60%, Computer Use 10%, Cthulhu Mythos 4%, Geology 35%, Library Use 85%, Occult 75%, Spot Hidden 35%, Handgun 35%

Languages: English 105%, Latin 65%, Greek 60%

Physical Description: Taylor is a tall, thin man with light brown hair and blue eyes. He has a beard and moustache. He also looks almost exactly like his ancestor, Dr. John Taylor.

Profile: Dr. Taylor is the last of the well-known Taylor line and the heir to the secret of the Taylors. Dr. Taylor is aware that John Taylor was an investigator of the Forbidden Science secrets and that he and his companion Dr. Pierce ran into some horrible trouble on Europa that resulted in Pierce's death. After learning of these events, and several others in John Taylor's notes (which were passed down through the family), Dr. Taylor became interested in what was really going on in the world and on more than one occasion he has had the opportunity to find out. Because of these experiences and his knowledge, Dr. Taylor was assigned to Pierce Outpost by MiliSci.

Taylor is a knowledgeable and brave individual who has faced some strange terrors in the past. Because of his experiences, he is ready for almost anything. He also suspects that something terrible has happened to the expedition.

Equipment: Arctic gear, automatic pistol, notebook computer

Dr. Neraj Gupta

34 year old, Competent, compassionate Medical Officer



STR: 12; CON: 14; SIZ: 12; INT: 19; POW: 12; DEX: 12; APP: 13; BRA: 13; SAN: 60

Hit Points: 26

Damage Bonus: None

Skills: Biology 65%, Chemistry 25%, First Aid 95%, Library Use 85%, Medicine 85%, Pharmacy 65%, Psychology 25%, Psychoanalysis 15%

Languages: Hindustani 100%, English 85%, Latin 15%

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Physical Description: Dr. Gupta is a tall, thin man with dark brown hair and brown eyes.

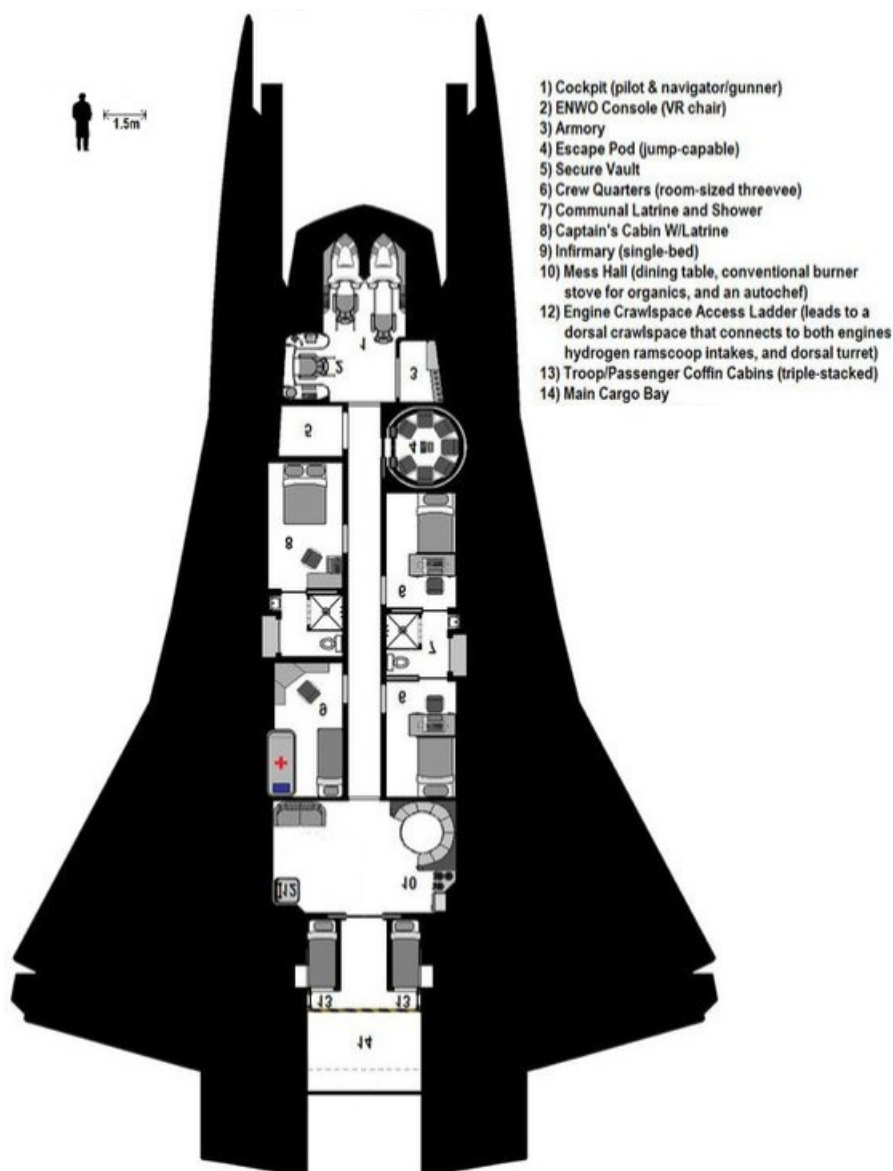
Profile: Dr. Gupta grew up in India and was educated in the United Americas. After practicing for several years in the United Americas, he returned to the Democratic Republic of India for several years. While in India, he was befriended by a holy man who taught him many things about medicine and life. On his death bed, the holy man told him he must “journey to the land of ice to face the bitter wind.” When Dr. Gupta heard that the UEF was in need of a medical officer for their research base on Europa, he knew he had to volunteer for the job.

Dr. Gupta is an extremely skilled doctor and a kind man. He employs a wide variety of medical techniques, ranging from the latest medical treatments to ancient yoga practices. Dr. Gupta has sworn never to take a human life and is a strict ethical vegetarian.

Equipment: Arctic gear, notebook computer, medical kit.

Suborbital Transport Vehicle

A sub-orbital flight is a spaceflight in which the spacecraft reaches outer space and circles the planet at least once. STV may go into space, but then their path (or trajectory) carries them back to the planet.



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NAME _____		Characteristics & Rolls		Hit Points																									
Race _____ Gender _____		STR _____ Effort roll _____ %	Major Wound _____																										
Birthplace _____ Grav. field _____		CON _____ Stamina roll _____ %	DEAD (— _____)																										
Age _____ Height _____ Weight _____		SIZ _____ Damage Bonus _____	0 01 02 03 04 05																										
Profession _____ Wealth _____		INT _____ Idea roll _____ %	06 07 08 09 10 11																										
Employee _____ Rank _____		POW _____ Intuition roll _____ %	12 13 14 15 16 17																										
INSANITIES Temp. Insane _____ Indef. Insane _____		DEX _____ Agility roll _____ %	18 19 20 21 22 23																										
CORRUPTION _____ % Traits _____		APP _____ Charisma roll _____ %	24 25 26 27 28 29																										
PLAYER _____		BRA _____ Fortitude roll _____ %	30 31 32 33 34 35																										
		MOV _____	36 37 38 39 40 41																										
Skills																													
Combat bonus (____) _____		Mental bonus (____) _____	Perception bonus (____) _____																										
<input type="checkbox"/> Airborne Assault (01%) _____ %		<input type="checkbox"/> Administration (10%) _____ %	<input type="checkbox"/> Alertness (10%) _____ %																										
<input type="checkbox"/> Brawl (25%) _____ %		<input type="checkbox"/> Appraise (15%) _____ %	<input type="checkbox"/> Alien Environments (01%) _____ %																										
<input type="checkbox"/> Garrote (15%) _____ %		<input type="checkbox"/> Anthropology (05%) _____ %	<input type="checkbox"/> Insight – psychology (05%) _____ %																										
<input type="checkbox"/> Gunnery (05%) _____ %		<input type="checkbox"/> Archaeology (05%) _____ %	<input type="checkbox"/> Listen (25%) _____ %																										
<input type="checkbox"/> Heavy Weapon _____ %		<input type="checkbox"/> Astrogation (00%) _____ %	<input type="checkbox"/> Orientation (10%) _____ %																										
<input type="checkbox"/> Martial Arts (01%) _____ %		<input type="checkbox"/> Astronomy (05%) _____ %	<input type="checkbox"/> Read Lips (01%) _____ %																										
<input type="checkbox"/> Powered Armour (00%) _____ %		<input type="checkbox"/> Biochemistry (05%) _____ %	<input type="checkbox"/> Recon (10%) _____ %																										
<input type="checkbox"/> Street Combat (05%) _____ %		<input type="checkbox"/> Biology (05%) _____ %	<input type="checkbox"/> Research (25%) _____ %																										
<input type="checkbox"/> Zero G Combat (00%) _____ %		<input type="checkbox"/> Chemistry (05%) _____ %	<input type="checkbox"/> Spot (25%) _____ %																										
Communication bonus (____) _____		<input type="checkbox"/> Computer Operation (05%) _____ %	<input type="checkbox"/> Survival (05%) _____ %																										
<input type="checkbox"/> Bargain (05%) _____ %		<input type="checkbox"/> Computer Program. (05%) _____ %	<input type="checkbox"/> Track (10%) _____ %																										
<input type="checkbox"/> Bribery (05%) _____ %		<input type="checkbox"/> Computer Security (05%) _____ %	Physical bonus (____) _____																										
<input type="checkbox"/> Command (05%) _____ %		<input type="checkbox"/> Data Analysis (05%) _____ %	<input type="checkbox"/> Climb (40%) _____ %																										
<input type="checkbox"/> Disguise (01%) _____ %		<input type="checkbox"/> Field Fortifications (10%) _____ %	<input type="checkbox"/> Combat Helicopter Pilot (00%) _____ %																										
<input type="checkbox"/> FastTalk (05%) _____ %		<input type="checkbox"/> First Aid (30%) _____ %	<input type="checkbox"/> Combat Driver (01%) _____ %																										
<input type="checkbox"/> Intimidation (10%) _____ %		<input type="checkbox"/> Forbidden Science (00%) _____ %	<input type="checkbox"/> Combat Pilot (Atm.) (00%) _____ %																										
<input type="checkbox"/> Persuade (05%) _____ %		<input type="checkbox"/> Geology (01%) _____ %	<input type="checkbox"/> Contragravity Harness (00%) _____ %																										
<input type="checkbox"/> Seduction (10%) _____ %		<input type="checkbox"/> Hyper-Dim. Physics (00%) _____ %	<input type="checkbox"/> Dodge (DEX x2) _____ %																										
<input type="checkbox"/> Status (15%) _____ %		<input type="checkbox"/> Law (05%) _____ %	<input type="checkbox"/> Drive (_____) _____ %																										
<input type="checkbox"/> Torture (15%) _____ %		<input type="checkbox"/> Medicine (05%) _____ %	<input type="checkbox"/> EVA (05%) _____ %																										
Manipulation bonus (____) _____		<input type="checkbox"/> Occult (05%) _____ %	<input type="checkbox"/> Freerunning (05%) _____ %																										
<input type="checkbox"/> Armoury (01%) _____ %		<input type="checkbox"/> Other Language (01%) _____ %	<input type="checkbox"/> Hide (10%) _____ %																										
<input type="checkbox"/> Combat Engineering (00%) _____ %		<input type="checkbox"/> Planetary Engineering (05%) _____ %	<input type="checkbox"/> Jump (25%) _____ %																										
<input type="checkbox"/> Conceal (15%) _____ %		<input type="checkbox"/> Physics (05%) _____ %	<input type="checkbox"/> Jump Belt (00%) _____ %																										
<input type="checkbox"/> Demolition (01%) _____ %		<input type="checkbox"/> Psychotherapy (01%) _____ %	<input type="checkbox"/> Low/Zero Gravity Ops (10%) _____ %																										
<input type="checkbox"/> Electronics Comm. (05%) _____ %		<input type="checkbox"/> Stardrive Engineering (00%) _____ %	<input type="checkbox"/> Marine Craft (10%) _____ %																										
<input type="checkbox"/> Electronics ECM (01%) _____ %		<input type="checkbox"/> Starship Battle (00%) _____ %	<input type="checkbox"/> Parachute Assault (00%) _____ %																										
<input type="checkbox"/> Electronics Systems (01%) _____ %		<input type="checkbox"/> Strategy (01%) _____ %	<input type="checkbox"/> Pilot Atmospheric (00%) _____ %																										
<input type="checkbox"/> Fine Manipulation (05%) _____ %		<input type="checkbox"/> Streetwise (05%) _____ %	<input type="checkbox"/> Pilot Aerospace (00%) _____ %																										
<input type="checkbox"/> Forensics (00%) _____ %		<input type="checkbox"/> Tactic (01%) _____ %	<input type="checkbox"/> Pilot Spaceship (00%) _____ %																										
<input type="checkbox"/> Forgery (05%) _____ %		<input type="checkbox"/> Xeno-Archeology (01%) _____ %	<input type="checkbox"/> Scuba (00%) _____ %																										
<input type="checkbox"/> Hardware (_____) _____ %		<input type="checkbox"/> Xeno-Biology–Ecology (01%) _____ %	<input type="checkbox"/> Stealth (10%) _____ %																										
<input type="checkbox"/> Heavy Machine (01%) _____ %		<input type="checkbox"/> Xeno-Medicine (01%) _____ %	<input type="checkbox"/> Swim (25%) _____ %																										
<input type="checkbox"/> Sleight of Hand (05%) _____ %		<input type="checkbox"/> Xeno-Zoology (01%) _____ %	<input type="checkbox"/> Throw (25%) _____ %																										
SANity / STAbility / HUMAnity																													
INSANE 0 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21																								UNCONSCIOUS 0 01 02 03 04 05 06					
22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46																								07 08 09 10 11 12 13 14 15 16 17 18					
47 48 49 50 51 52 53 54 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72																								19 20 21 22 23 24 25 26 27 28 29 30					
73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 89 90 91 92 93 94 95 96 97 98																								FOCUS _____					

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Melee Weapons							
Weapon type	Attack/Parry	damage	range	# attacks	length	hand	HP
<input type="checkbox"/> Fist (50%)	____ / ____ %	1D3+db	touch	1	close	1h	n/a
<input type="checkbox"/> Grapple (25%)	____ / ____ %	special	touch	1	close	2h	n/a
<input type="checkbox"/> Kick (25%)	____ / ____ %	1D6+db	touch	1	close	0	n/a
<input type="checkbox"/> Head (10%)	____ / ____ %	1D4+db	touch	1	close	0	n/a
<input type="checkbox"/> Brawl (25%)	____ / ____ %	1D3+db	touch	1	close	1h	n/a
<input type="checkbox"/> Garrote (15%)	____ / ____ %	1D6+db / round	touch	1	close	2h	n/a
<input type="checkbox"/>	____ / ____ %						
<input type="checkbox"/>	____ / ____ %						
<input type="checkbox"/>	____ / ____ %						

Firearms							Armor	
Weapon type	weapon	ROF	damage	range	Ammo	Fail	Armor type	
<input type="checkbox"/> Handgun (20%)		_____ %					AP	_____
<input type="checkbox"/> Shotgun (30%)		_____ %					ENC	_____
<input type="checkbox"/> Rifle (10%)		_____ %					Rad. Shield	_____
<input type="checkbox"/> Machine Gun (15%)		_____ %						
<input type="checkbox"/> Heavy Wpns (10%)		_____ %						
<input type="checkbox"/> Energy Wpns (10%)		_____ %						

Nanoware		Bioware		
Nanoware type	augmentation	Bioware type	augmentation	SAN

[illegible]

Luck								OUT OF LUCK		0	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	56	57	58	59	60	61
62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	89	90	91	92	93	94	95	96	97	98	99

**For space is dark
... and full of terrors**



**New Horizon is a game
about humanity's spread
into our solar system
and the horrors we
discover as we go there.
It is an exciting mix of
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Lovecraftian horror and
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Core Rules 6.2 - Volume 2